

[illegible]

**Figure 1:** Human Genomic DNA for estrogen receptor alpha.

TCTTGGCTTACACCTCAGATCTCTGGGAGAAGCAGGTCACAACATGAGGGAATCATCCATGACACCCACTG  
TCCCATGACCTTCTTTGCCCTCCACCTGTTTGTGCCCTTTTACAATCATCAAGATATTTGATCTTGATT  
TCGATGTTTCTTTGGATACATATCTCGAAGTGGGAAGCTGGGTTTACATGGTATAAGAGATATCAGCATT  
CCATGTTTATAGCAGCATATTACAGTGGCCAGGATGAATAACGGTATATGCATACAAATGGAGTATT  
ATGCAGCCATGAAAAAGAAGGATATTCTGCTTCTTCTATCATATGGCATGACATTGATGGACCTTTAGGA  
CATTATCCTAAATGAAATAAGCCGGTCAAAGAAAGAACAAATCTGCATGATTCCACTTATATAAGATATC  
TGAATATCTACATTATAGAAATCAAAGAGAGAAATGGTGGTTTTTACAGGGCTGGAGGCCAAAGGAAACA  
GGGAGTTTACATAGAAATGGGCATAATGTTCCAGTTAAACAAGTTGAATAAGCTCAGAGATTGATATAC  
AACATTCTACCTAGAGGTGACAATGTACGGTGCACCTTAAAAATTTGTTAAGGGGTAGATCTCATGTTAA  
ATGTTCTTACCACATTAAGAGAAAAACAAACAACAAAGATATCTGATGTTTGGAGAAATTCTCACAATTGG  
CTGAACCTGTCTCCACTGAGCCTGGTGGCAAAAGCAGAGCGGGGAGGCTCCTCTCTAGATCAGTTTGTG  
AGAGTTGAGGGAGGGGACCTTGAATGACCAATAATCTTGGAGAGAGTGTTCGATGTAGAGGCAGAAAA  
CAAAAGCACATCATCAAGAGTGCCTCCTGCTATGTTTATGCCTATTTTACTPGTCTTTTCAAAGAAAAG  
TTTTAGTTTAAATGTACAACAAATTTTGAATTTTCTTTTGTGTTTTTCAAAATTTATGATTTCTGCTG  
TTTCTATTATTATTGTTCTTTGTTATGCTTTTTTGGGGGGGAGGCTATTGTTGTCTTTAAATTT  
TTGAGTTGAAAGTTTATCCTATTTATTTTGTAGTCTTTTTGGTTTTTAAATGAATATATTAAAGCCTCTGAA  
TTTTTCTCTGAATACTGCTTTAGTGGTATTGCACTAGTTTTTTTTTAAACCCCTGTCTCTGGTTTTATTA  
ACAGCCTTTTCAACATAATTCAGTCTTATAACACTGTCTACATATTGTTTTTAAATGGTTTTGAAGAT  
TAGTTTTTTAAACATAATTTCTTTCTTTTATTATTATTATTGACAGGGCTTGCTGCAATGGCTTA  
GGCTGGAGTCCAGTGGCGTGATCATGGCTCACTGCAGCTTTGACTCCCTGGCCTCAGGTGATTCTCCCAT  
CTCAGCCTCCAGAGTAGCTGGGACTACAGAAATGTGCCACTACACCTGGCTAAATTTTATATTTTGTAT  
TTTTTTTGTGTTGTTGTGTAGAGATGAGGTTTACCATTGTGCCAGGCTGATCTCGAACTCCTGTGT  
TTAAGCCATCCACATACCTTGGCTCCCAAGTGCCTGGTATTACAGTGTGACGTACCATACTGGCTAA  
AAACTAATTTAAACAACGTCATTATGGAATAACAATTTACACTGCTTACAGCTCACTAATTAAGTGT  
GCATTTTCATGTTCTTAAAGTATATTTCAAAAGTTTTGTGACCATCAACAATTTCAATTTTGAAGTGT  
TTTGTCTTTTCTAAAGAACCCCATCTTTCTCCCAACAATTTCCCTCACTTTAAGCCACCAGTAATC  
TACTTTTTGTCTTATGATTGTTTGCCTATTTAGAAATTTCATATAAATGGAATCATATAATATTGTGCGCT  
TTTGTGACTGGCTGCTTTCACCTTAGCATAACTTTTTTGAAGTTCATCCATATTGTAGTGCTTCAGTCTCT  
GTTATGGGGGAATTAATATTCATTTGATGTATGATATACATTAATAAAATCTATTGTTATTGGTAAACA  
TTAGAGCTGTTTCTACTTTTTTGGTATTATGAGTAATGCTGCTAAAAACATTGTATACAAGTTCTTGTGT  
GAATGTGCTGCTTTATTGTCTTGTGATATACCTAGAGTGAATGTTTAGGTACATAGTAAATGCTAT  
GTTTACCTTTTGAGACATTGCAAACTTTTTTCCAAAGCAGCTGCACCATTATAAATTTCCACCAGCAAT  
GCATGAGGATCAATTTTCCACATTTGTTGTCAACACTTGTGTACTGCTTGAGGCCAGCCTAGTGGGTGTG  
AAGTGGTATTTCAATGTGTTCTGATTTGCAATGCTCTAATAACTAATAATGTTGAGCGTATTTCTATGT  
GCTCACTGCGCAATTTGTCATCTCTTTTGGAAATATATCTATTCAACCCCTTTGCCATTTAAATGTG  
TATTATTTTCTTTTATTATTGCAATGTAAGAGCTCTTTAGATCTTCTAGATGCAAACTTTTATCAGA  
TATATGATTTGCAAAATATTTTCTACTGTTCTGTGTGCTGTTCTATTTTAAATTAATTTCTGTGAAGC  
CAAAAGTTTAAATTTGATGAAGTCAAAATATCATTAATCTTTTGTGTTGTTGTACTTTTGGTGTCT  
ATAGCTAAGAAAAATTTGCCTAATCCAATGTCTAGTAAGATTTATGCTTTTCTTTTCTTTCTCTCTCT  
TTCTCTTTTCTTTCTTCT  
TTCT  
TTTTTTTAGGCAAGGCTTATATGTTGCCAGGTTGGCTCATAACTCCTGGGTTCAAAGAGTACACTT  
TCACTCAGCCTCCTGAGTAGCTGGGACTACAGGCATATGACACTGTGCCGATTAAAGAGTTTTATAAT  
TTAGCTTTTGCCCTTAAGTCTTTGATCTGTTTTGAGTTAAAAATTTGATAGCGTGAGGTAGGTGCCAA  
CTTCTTTCTTTTGCACTGTGGCATCTAGTTGCTCAGCAGCAATTTGTTGAAAAGGCTCTCTTTCTCCTCT  
GAATTTCTTGTGTGCCCTTGCGATGTGAGTGACTAATTTCTGAGTTTATTCTGAATCTCAATT  
CCACTCCACTGATCTAAGTTTATTCTTATTCTAGTAGTCACCATTATTTTGATCTTCTTCTGTGCTCTC  
GATTTTTTCCCCTGTAGAACATCTCCAGTAATGGTTTATATAAGTTTGTGATTAGTGATGTTATAGTGT  
GATAATGTGTTTATTGCTCTTACACTTTGGCTGAGCTTGAACAAATTTGATTTTGTACCTTTGATATGCT  
TTTGGATATTGPTCTCCAACTCATGTTGAAATGTAATCAATGTTTGGAGTTGGGCGCTAATGC  
AAGGTATTTGGGTCATGGGGTGGATCCCTCATGGCTTGGTGCTGTCTCTGGGATAGTGAATGAGTTCTC  
ATGAGATCTGGTGTGTTTAAAGTGAGCGGTACCTCCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
GTGCGCTGCTTCCGCTTACTCTTCCACCTGAGTAAAGAGCTTCTGAGGCGCTCACCAGAAAGCTTAGACA  
TGCAGGTGCCATGATCTCTGATAGCCTGCAGAACTGAAGCAATTAACCTCTCTCTTGATAAATTA  
CCCAGCCTCATATAGTTTATAGCAATGGAAGATGCCGAATACAACTTTGAGATGTCTGTTTCACT  
GTCATCTTTGCTTCAGAGTTACTGAGAAAGAGCTGATGATCTCATTTCTGTTTCTTAGTTGATAAATTTG  
TTTTTATTATTATCTTTCTCTCGAAGACTTTAGATTTTCTTTTATTATTAGCGTTGAAATTTTGA  
CAGTACTGTTTTGCGTGATTCACTTTTTTATTCACTTTTGTCTTTTCAATCTGAGGATTTTGTTTGTTCT  
TGGAGTATTTCTTTATTATTGCTTTGAGTACTGCCTTTCTCCATTCTATTCTTTCTCTCAGGCACCTCAT  
ATTTTCAAATATTAGAATTTTGGATCTGGTCTTAAAAAGGAAATAAAAAACTATAATCAGACTAGAAT  
AAGAGGGTACCCTTGACAGTCCAAAGAAATGAAGAAAGCCCTGACATGCCAAAGACATGTTTACAGATA  
AACTTGAAGACAGAAATCTGCAGCTGGGGCGCAGTGGCTCATGCCTGTAATCTAGCACTTTGGGAGG  
CCAAGGTGGGTGATCACTTGAGGTGAGTGTTCGAAGACAGCCTGGCCAAACATGATGAACCCCTGTCTC  
TACTAAAAATCAAAAAATTTGCCCTGGCCTGGTGGCGGCGCCTGTAATCCAGCTACTCGGGAGGCTGAG  
GCAGAGAAATGCTTTGAACCTGGGGGACAGAGTTGCCATGAGCTGAGATAGTGCCACTGCATCCAGCG  
TGGGTGACAGTGAGAGACTCCATTTCAAAAAGATAAAAAATGACACAAGAAAGATGATAGAAATGACAGG  
ATGTGGAGACACAACTCAAACTCTAGGTTCCAGATCTTGACATCTTCCCAGTCTCTACTGCTCTGCATC  
ATGTTAGGCTTAGAAGATTACTCAACCTCTTTGATCTTTGGATTCTGATCTAAAAATGGAGTGTGGGGG  
GCGTGGTTAAAGTGATAATTTTGAATAAGTCTTCAAAACCACATGTCATGAGCCTCTCTGAAATGGCA

[illegible]

FIGURE 1, sheet 2 of 94

CAGTTTGTATTGTTTTTCTTTATGCTATCTATTTCTTGGATTATTTCTCCCTTCGCTTCTTCTATTGTT  
TTTTGGATTTCCTTGCAGTGGGGTTGGCTTTCTCTGGTGCCTCTGATTAGCTGAATAACTAGCCTTCTG  
AACTCTTTTTTTCAGGTAATCAGGGATTCTTCTCAGTTAGATCCATTGCTGGTGAGCTAGTATGATTT  
TTTTGGGGGTGTTAAAGAGCCTTGTTTTGTCAATATTATCAGATTGGTTTTCTGGTTCTTCTCATTGG  
GTAGCCTCTGTGAGGGGAAGTTCATGGCTGAAGGCTGTTGTTCTGATTTCTTTATCCACGAGGTGTT  
CCCTTGATGTAGTACTCTCTCCCTTTTCTATGGATGTGGCTTCTTGAGAGCCGAACCTGTAGTAATGGTT  
ATCTCTCTTCCAGGTCTAGCCACTCAGCAAGTCTACCAGGCTGTGAGCTGGTATTGCGGGTTGTTGGCAC  
TGAGTTCTGTGGTGTGAACGTGTGTGTCTCTCCGCCATGGACACCTGCACCTGTTATGGGGGAGGTG  
GTAGAGGGGTGAACCGGATCCCTGGTCTTAGCTTTGGTGGTTAATGCTCTATTTTGTGCTGGTGGC  
CTTCTGCCGGGAGGTGGCGCTTTGCAGACAGCATCAGCTATGGTAGTGTGGAGAGGACTGGCAGTGGGC  
GGGGTCTAGAGCTCCCAAGAATATATGCCCTTTGTCTTCAGCTACTAGGAGGGTAGGGAAGGACCATC  
AGGTGGGGGAGGGCTAGGCCTGATCTGAGCTCAGACCTCCTTGGATAGGTCTTGTGTGGCTGCTGTG  
AGGGGATGGGAGTGGGTTCCAGGTCAATGGAATTGTGTACCTAGGAGGATTACGGCTCCCTCTGCGGA  
GTCATGCAAGTTGTCAGGGAAGTGGGAGAAAGCAACAGTCACCAGCCTCACCAGCTCCTGCGCAATCC  
AAAGGGGTGGTCTCAGGCCACTGTGTCCCGCTAACAACTCTGAGTCTGTTTCCAGGAGGGGGTAAGC  
AGGGCTGAGAAGTGGCGAGTGTGCCACCTCCAGTGGCAAAAGAAAAGGGCTTTAGTTCTTCCCCAG  
CCTGTGGAGTCTGCACGAGGATTGCGACCCCTCCCCGTGTTATGGCCAGGAGGCTTCTTGACCGGTTCA  
AATTGTTACAAAGTTCAGCTGGAGACTCCTTCTTCTGTGGTGGTTTCCCCCGTGCCTCTGGCCACCCTC  
CTGAAGGATCCTTGTGATGCCAGGAGGTGGCTGCTTGGGAGCCAGCGAGCTCCCGAGGCTTTC  
AGCTGCTTCTCTATCCCTGTGTTTTGCTTGTCTATCTAAATTGACTCAGCTCCAGATAAGGTGAGAATC  
TTCTCTGCAAACTAGAACTTCACTTTCCCATAGGAGGTGTGCGTTCCAGGGCGGAGGATCTCCCTTTC  
CCACTTCCGAGTGGGGCACTCACATAATTTGGGGTGTCTCTGGTCCAGCAGGAGCAGTCCGCTTCC  
TTCAGAGGGTCTGTGGTCCCTGGGATTCCTGGTTATTCTCAGTGTGTTCTGGAGCTGAAATTCAC  
AATGTGAGCTCTGCACGCTGTTCTGTGCGTCCGAGTCAAGCTGCCATCTAGTTTGTCCCTCCCATCCGT  
GGTGATGATCTATGATCTCTACAGGATACATTTGCTAGAAATATTGTTCTCTCTGGCCGGGCGCGGTG  
GCTCAGCTTGTAAATCCAGCAATTTGGGAGGCGGAGGAGGTGGATCAGAGGTGAGGAGATCAGAGCC  
ATCTTGGCTAACACGGTGAACCCGCTCTACTAAAAAATAAAAAAATTAGCTGGGCGTGGTGGCGGG  
CGCTGTAGTCCCAGCTACTCAGGAGGCTGAGGAGGAGAAATGGCGTGAACCCGGGAGGCGGAGTTTGCA  
GTGAGCCGAGATCGCGCACTGCACCTCCAGCTGCGCAACAGAGCGAGACTCTGTCTCAAAAAAATAA  
AAAAAATAAAGAAATATTGTTCTCCCTACCCTAAAAGGATATAATTGAAATACAAAAAACAATATG  
GAGAGGTAATTTCTTCTTCTTTCTTTTCTTTTCTTTTCTTTTCTTTTGGAGACAGGGTCTTGTCTGT  
TGCCCGAGGTGAATGCACTGGGACAATCAGCTCAGTGCAGCTTGACCTCCTGGGCTCAAATGATCCT  
CCCACTTAGCTTCTGAGTAGCTGGGACTACAGATACGCCACCACACAGCTAAGGTTTAAATTTGT  
TTTTAATAGTGAGAAATTTCACAATTTTGGCAGGCTGGTCTCGAACTCCTGGGCTCAAGCAATCTGCC  
ACCTCGGCTCCCAAGGTGCTGGGATTATAGGCATGAACCACTGCACCGGAACCTTGGAGAGGTAATTT  
TAACAAGGCCATCTTTCTCTAACAGAGGAGCACTAAGAAGTCAATTTATCCTGGCATGTGACTGTCA  
CACAAGCAATGAGTGTGCTGATTAGAAAGCTTGTGTAGCTCAGAAATATCACATAATATGCAGTCTCCG  
TTGAGCAACATTGCAGCTTATGTTTATTAGGTAAGCAATAGTAATCTGAAATATTTTAGGTATATCTG  
CCATTATTTTATGACTAAACAAGGAGATGATTTTAGTATTGATTACTTTTATGCACATATTTAAAACT  
CCTGATTTTTTATGTTGAAACATTCCAGTTCTTTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGCCGAGTCT  
CGCTCTGTGCGCCAGGCTGGAGTGCAGTGGCGGGATCTCGCTCACTGCAAGCTCCGCTCCCGGGTTCA  
CGCCATTCTCTGCCTCAGCTCCCGAGTTCTTTCTTATCTAGCTATTTGAACTATACATTTGATTGT  
ATTCCAAAAATAGTACAATATTATGATCAATAAAATGTCTAACTTTTGTAGTGAAGGTTTG  
TTCAGGTTATAGTATGAGTGCAGTCACTGTTTTTGGCATGGGAGGAGATGTTTCTAACTAGCCAG  
TTATAGGTGTCACTACCAATGTTTACAAATGTGGACAGGAGAGAGAAATTACAGATGCTGGGTGGA  
AACTTTGGTCTGGGCTGATCTGCCCTAACTTGGCGTGAAGCCTCAGTTTCTTCTACTACAGCAGG  
AAAAATAAATGCTTTTATCTGTTTCTGTTTCTGCTATGATAACAATAATATATGATGAGACA  
ATTTAAAACTTAAAGCATTTTAAAGTCTTGGTCTTTATGGGAGAGGAGGACCATCTTTCTTCTCT  
TTTTCTTTTCTTCTCTCTCTCCCTTTCTCTCTTTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT  
TCT  
TTACTTCT  
CCTTTGAGATGGAATCTTGTCTGTCAACCAGGCTGGAGTGCAGTGGCATGATCTTGGCTCACTGCAGC  
CTCCACCTCCAGATTCAAGTATTCTCGTGCCTCAGCTCCCTAGTAGCTGGGATTACAGGTGTATGCC  
ACCACCCAGCTAATTTTTTTTTTTTTTTTTTTTTTTTTTTTGGAGACACTATTTCACTCTGTCAACCAGAC  
TGGAGTGCAGTGGTGTGATCTGGCTCACTGCAAACTCCACCTCCAGATTCAAGCAATCCCTGCCTC  
AGCTCTCTGAGTAGCTGGGATTACAGGTGTGACCAACCATGTCTGGCTAATTTGTATTTTTAGTAGAGA  
TGGGGTTTCCCATGTTGGCCAGGCTGGTCTTGAACCTCTGACCTCAAGTATCCACCTGCCTCGGCTC  
CCAAAGTACTGGGATTACAGGTGTGAGTCAACCGCACCCGCTCTTCTCTCTCTCTCTCTCTCTCTCT  
TCTTCT  
AGGGTTTGATAAGTGTCTGTCTGTGCTGACAGTTTTCAGGAGCAGTACAGAACTCCTATTTTGTACTCC  
AAATAATCCACAAGAAATTAATTGGATCACCTCGAAGGAGGAAAGAGAAGCTCAAGAGATCAGGTAAGTT  
GCACAAGCTCTGAATCCAGCACACCGTGAAAACGGGCTTCAATCTGGTCTTCTGATTCCAAAGCTA  
TAGTCTTACCTGTGATTCACTTCTCTGATTGTTTAAAAAATAAATAAATAAATAAATAAATAAATAA  
CTTAAGTAAATCCAGGGAATTTTTCAGCAGAAGTTTAAATGTTGGTAGAGAAATTTCTTGAGGCAAAA  
CTGATAATCATAAGCTTGTCTGGCTACCAAAATTTGATCTGGTAGTCAAACTTCTTGGTAAAGTTATCA  
GTATAGAGACCAAGAGAAACAATAAGAAGAATCTGCTACTAAATTTTGGCGGAGTTGAGAAATTTTT  
AATTGAGCTTCACTCTAAGAGATAAGAGTCTGTGACCAATTGTATTGTGTGTTTGCATTGCTATGAA  
GGAATGCTGAGGCTGGGTAGTTTATAAGAAAAGAGGTGATTGGCTCAGAGTTCTGCAGCTATACA  
AGCAGGGCAGCAGCTTCTGCTTGGCTTCTGGGAGGCTTCAGGAAGCTTTTGTCTATGGCAGAAGGCAAA  
GAGGAGCAGGATGTCATGAGAGGGAGCAAGAGTGGGGAGGAGGTGCCAGGCTCCTTTAAGCAACC  
AGCTCTGTCATGAACATAAGAGTGAGAACTGAATCATTACCATGAGGAGGACCAACTCATTATGAG

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AGATCCGCCCCATGACCCAAACACCTCCACCAGGCCACCTCCAACACTGGGGATGACATGTCAACA  
CAAGATTTGGACGGGACAAATATTTCAACTATTACCCATGTTCCCTTAACCTGAAGGGAGTTCACATTAG  
GACAAGTTCACCTGAAATCTTTGTTTGGGAATGGGGATGGATAAGACATCATTTATTAAGTTATGGTTTT  
AGTTTCTGGCTTTGGCTAACTCAAACAAAAGGGAATATTTACAGACTGGTGTGGTAAATCATAGAATG  
ACAAACAATTGGAAGACAGGTTAAAAATGAACCTGGAGGACATTAAGTGAATTAAGCCAGGCACAGAAAAG  
ACAAATACCTGCAATTTCTCACTATATGTGGAATCTAAAAAAGTTGAGCTTATACAAACAGAGAGTAGA  
ATGGTGGTCACCAGAGGCTGGGGAAGGAGGAGTTGAGGAGATATCGGTCAAAGCATACAAATTTTCAGTT  
AGGCAGGAGGAATAAATCAAGAGATCTATTGTACAACATGGTGACTGTAGTTAATAACATTGTGACTGT  
ATTGAATTTCTGAAAGTTGCTAAGAGAGTAGATTTTAAAGTGTCTCACTTAAAAAATAAGTATGTGAGA  
TAATGCGTATGTTAGTTAGCTCTATTTAGCCATTTCACAATGTGTATGTAGTCCAAAATCATGTTGTACA  
TGATTTCATAAATACATTTTTATTGTCAATTAATAATACCTGGAATTTGGGCAACAAAAGCTATCTGCC  
CAGGTGGGAACAAATCGCCTCTGAGCATCTTTCTTCATTGCATCTCTAATCAAGATAGAAAGTCCCTGG  
AGAGAGGGTCTGATTGGACAAGCTTGAGTCCGATCCCTATACCTTTGGCTATGAGAGGAATATTCTTGCTG  
AAGTCGCTGTGATAGACCTGTGGATGCATTTGGCTTGGAAATACGAAAGCGCTTGATTTAGAATCCC  
CTCAAGTCTGTCTGTTACAGTGGGATAATTTTTATTCTCTCCTCCTCCAGAAGGAATCAAGGGGTGTCA  
TAAAGGAGGTATGTCTGTCAAGCAGAACTACCTCCCTCCCAAAGAAAGTCTGTTACCATGTATACCTTT  
TAAACATTTTATTTTAAAAATAAATTAGACTCACAAGAGTTACAAAACAGTACAGAATTGCCATGTAA  
CTTTTACCAGCTCCCCACATGATACCATCTTATATACTCTAGTACATTATTAATAATATGGACATTGA  
CACCAGTAAATACTATTAAACAGAACCATACTTTATTCTGCTTTTGCTTTTTATTTTATTTTATTTATT  
TTATTATTTTGTGAGACAGAATCTCGCTCTGTCAACCAAGCTGGAGTGCAGTGGTGCATTGCAACCTCT  
ACCTCTGGGTTCAAGCAATTTCTCTATCTCAGCCTCCCATGTAGCTGGGATTATAGGTGCCACCA  
TGCTGGCTGATTCTGTATTTTGTAGAGATGGGTGTCAACATGTGGCCAGGCTGGTCTCGAACGC  
CTGACCTCAAGTGTCTGCCCCCTCTGCTCCCAAAGTGTAGGATTACAGGTGTGAGACACCAAGCC  
AGCTGTGTTGGCATTTTTTAAATACGTGCTCTATAATATTGATTTTTGTGTAAACATGTGTTGTATATA  
TCTATAACGAGAACTCAAGTCTACTGTAATCCTATTTGTAAACTGACTTTTTCTTTTATCAGTATAT  
CAAGATTATTTTCCACATCATTTGACATTTTTCTACAGTGAATTTAATGGCTACATTGTTTTCTATC  
CTATGAATATATCAACCTATTTCTTAAAAACCTACTCAGGGAATTTAAAAAATAAAACAGATGTTTTA  
ATATTATAAAGATTCAAGTGTATATTCTTATACGTACACATTTCTAAGGTTTGAGTCTTACAAGATG  
CTGAACTAGCTAAGACTACTGGTCTCATCTGTACATAGGGAATAATATAGAAGGAAACATCAAGAT  
TTGGAATAATCTGTGAGAAATTTGTCATTAGTGTGTAGGTGTGTGTGTTGGGGTGGTGGCTGCAGCTT  
GGGCGAGAGGCTCAGGTGTGGCTGTGGAGTGTAGATAGAGTTTGGAGTTCGGCTTTTGCCCCAGG  
ACACTTGGTGCCTGCCCCAGAGCTGCAGCCAGAAGGCCGTTCTCAGAGGTGAAGTCCAGGCAGTGAGG  
AGCTGTCTGCCAGTAGGCGAGTTGAAGAAAAAATGAGCTAGAGGAAAAAACAACAAAATCTCC  
TTCTAATGCTGCCAGGCTGCCGGGAGCTGGAATGAAGCACTGACAGGAGTGGGTATTTTCATGGTGAAGG  
GAATAATCAACTGGTTTTTTTGGTACCCAAGACTTTCCACCTTCACACACACATGAGATGCTTTGAAA  
TAAAGATAGTCACTTGACTTAGTAAAGTTTGTGACATAAAAAATATGAGAAATACCAAAGAAATACAAAA  
GGAAACTTCGTTAATATTATTCAGACTTAAATCCAGATTGTATCAACATTAAGGGGGTGTATGAAAA  
CATGGGAGAAAGCCAGGACGTGAGATCGGGCTCAATTTGACTTGTGCGGGGAGGATATCAACACAG  
AACTTTTAAAGATTAGAGGCATTAAAAAGAAATAGAAATCCTGAATCAAATTGAACAGTAAATAAAA  
TAGTCCAAAGATGTGTAATATATCACTATCACAATAACTATAAATAGGTTAAATTTGCCAGTTGAAAGA  
AAGGAATATTAAATGAGATTTTAAAAATTTGGATATATGCTTTTCATGTGAACATACCTAAAGCATATA  
CACAAAACCAAGAAATAAAAAGATGGAATATCCACAGAGTGACAAAGGAAAGCTGGTGCATTGTATTA  
GTATCAGATAGAACTCAGATTAGATTAATAAATCATTATAGTAATAGAGAAAGTCAAGGTTAAAGTTT  
AATTCACCAAGAAATATCCATTCTAAACATGTATACATACCAATTAAGCTGCCTCAAAATATATATGAC  
AAAAATTTGGGAGAACTATAAGTCAAGATTAAGGATTGAAAGGAAAGAAATGAACTAATTTTTCAGA  
TGATATACACGTTTACATGAAAAAACTCCAAAGAACTTCAGGCAAAATTTATGAAATTTAGGAGAGCT  
CCGCAAGAGGGCTGGATATAAAATTAATATACAAAGTCAATGTCAATTTCACTATACAGAAAAAGACA  
ATAACATTAGAAATAAATCTAACATAAGATGTAGAAAACTTCTTAGAGGAAAAATTTCTTGGGAAT  
ATTAAAGAGATCTAAATAAGTAGAATTACATAATTTTCATGCATAAGAGGCAACATTTTGAAGACGTC  
TTGTTATACATAGGCCTAGGAATAATATAGTTTAAAGCTATATTTTGAAGTGTAGATGAAGAAAAGC  
TCTTTTTTCTGTAGTATTTTAAAGTTTGAATAAAGTCAATTTGCTCTAGGAATTTTATACTTCTG  
CCAGCAGTGTGAGAAATGCTACTTCTACATTATCACCACCATAAATGTTTAAACCTGATAGCACAC  
AGTTTAAAAAATTTGTAATTTCTCAATTAACAGTGACCTTAAAAATTTAGTTTACTGATCTCTATTATT  
TTGTCTTTGTAATCTTTTATTAGTTTTTATGTTTACATGTTCCGTTTTTAAATAGACTTTTAAAGAGCT  
CTTTGTATTAAGAAATATAAGGCTTTGTCCATATAATTAGTATTTTTCAGAAATACCTTTCTAGGTACAG  
TTTTTCAGTTCCAGTGACAGAATGGAACCTGTACCTGCTACACCACATTTTCACTAGTATGTGATGT  
ATTTCATCACAACAACAGTATTGGCCAACATTTTCCCTCACTGTGAAGTGCACATTTGACATCTTTTGA  
AAAATTACTGACGGTTTTGAGACGATTGTTCTGTGCTTTCTTTCAGTCAGCATAATTTTCCCGAAAGCAG  
AGATGACTCTTCCAGACTTGCTACCAATGCTTGAACAACTGTGTAAGCTTAGTCCAAAAAATAATTTG  
ATTAATAGATTTTATTTTGGTAGATTCTAAGGTTCCAAGCAGTCAGAGAAATATCGCAGAGCCTCAAAT  
ATCTCCAAAATCTGATACCAATCCTTTGATTGTGAATTATATTCTGTAGCTACCAAGAAAGGTAAGTTT  
TTATTTTTCTACTCTATTAACCTTTCCCTTGGACAACCTGAATATTAAGATGACTATGTAAGGAGGTTATC  
AGACCAAGGCTCAGACATCAGGATAGGATAAAGCAGATGCCATAGAAAGAACTTTGTGCTCAAAAGGTGAT  
ACCAAGACAAGGCTGTGGGATATATATGGGCACAAATGTTGATACCTTCAAGACTTCATACATGTTGTG  
GAGGTTTTTGGAGATTTTAAATTTATAATGACAATCTTCCAGTTAGGAGAATTTTGGACTGTAAAGTTA  
GCCAAACAACCTTTCAATGATAATAAATGTCTATATCTTACACAGGGGAAATACAGTTTTTGTGTTTTT  
AGTTTTTCTGTCTATTCTATATAGGGGCATCATATGCTTTTATCATTAATAAATGATTTAGATAGGCA  
GTTGTAGAGAAATTTAATGTGTGGGAATTTAAAGTTTTTAAAAAGATGTAGCAAAATATAGATACATTAA  
GACCCACTGCACCAATGAAAAAGGGAATTAATTAACATAGACAACTTTTATGGGTACTAACCATTAAAA  
TTAAATTTTGTGATTTGTAATTTACATTACATTATAATAGTTTTCAATCTATTGTTAAGTTAAATATTT  
TGGGTAACAATTTGATTTTCAGATTGTTTACACTTTGCATAATTTTCAAGGAAATGAGTCCCTTAGGG

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AGAAAAATTGTTCTTAAATTTTATTGTTGGATAATGTTGCTGTACTAACATGGTTTACTGAAGTGGATCTA  
 CCATGGGTGTTTAGGTTTGTGTTTACAAAATGTATTGGGTGAAATTTTCCATATCACTGGTGAACCTT  
 TTCTATGCTAATTTTCCAGTCCCTTAGTTTAAATATTATGCATTTTTCCTGCAATCTATCTTGAATCTG  
 AAAAGGCCCCAGAGGAATTAGCGTGAGTCCAGAGTAGATGGACTGCAAAATGTTACACATATTTCAATAT  
 GTATCCAGCTTTCAAAAATAGCTTATTGAAATCAAGGTTGAACACATGAAATTTGGGTTTTTTGGAT  
 GTAAAAAATGGTTATATATTGGCATTTCATATCATCCAATCTAATATCTTCTCTAGTGAGGTTCTGGC  
 AAAAAAAGTATGATGACCAGAGTTGTTCACTCTTTAAGCTTTATGTTTCAAAATATTTTAAATTT  
 AAAACCATCTAAGTGCATCCCAAAAAACATTGGAAAATTTGTAGGCTAGTTTGTTTAATGATTTTCT  
 TCTATAGATTTATTTTATGCTATGCCTTACTCTCCAATTAGATTTAGCCATCCAAGAAAGGTACCTTG  
 TACTTCTAAGCGATTCTCCCATCACCTGGACGTTAACTGCAGCCACACTGCAGTGTCTTGACTGCAGTA  
 GGCACCTCAGTAAATATTATTGATGGTCTGATTATGGGATGATGAAATATGCTAAAGGTAACCTAAACT  
 TTTGTCAATAAAACCGAGTTTTCAGGTTAGTTTGACCTTTTCCGTATCTCTAAATATTTTCTTTCATGTCA  
 TTTTGTGAAATAGCTCACGAAAGTACTTATTGATTCTGAAATCCTTTTCCCTCTGGTATTCTCTGAGCT  
 ATCCTCACTCACACACAGCACACAGTGTATTGTTGCTGTTTGTGTTAAATCATTCTCATTAAATATTC  
 CTCATTCAATAAAAAATAGTTGATTCCCACTTATGCACCAACTCTATTCTAAAGACTGCTGTTTATTTTA  
 TGGAGTCAATATCATCATTTTGTGTTTCCATTCCACATAATAGTTGGATGCCAATATGAAGTGTATATTTA  
 TAAATAATATGTGCTTTTTTTTATTTGTTTATTTTATTTTACTTTAAGTTCTGGGATTAAATATGTGCTTT  
 TAACATTATTGTTTAAATAAACAGGAGATATCATATCTTAAGCACCTTCTATATTCTGGGCACTGTTCT  
 AAATGTATCAAAGTTATCATCTCATTTAATCCCTCCACACACTGAGGGAAGAGAGTATTATTCTTATT  
 TACAGATAAGGAAGCTGAGGCTTGAAGATTATATATCTAAGATCACAAAGCTAGTAAAGCAGCCAACT  
 TTGAGTCTAAATCCAGGTTTAAATATCATATTGCATGTGGGCATAGATGAGCAGAAACAGGTTTTCCTG  
 AAGATGCCAGCTCTAAGGCTTAGAAGAAGGAGCTCGGGGAGCCTAAACCAAGATATGCTAAGGCAAGTT  
 TTTTGTGCTGTTTGTGTTTGGATGAGGTTTCGATCTTGTGCCAGGCTGGAGTGCAGTGTGATCT  
 CGGCTCACCGCAACCTCCGCTCCTGGGTTCAAGTGATTCTCCTGCTCAGCCTCCTGAGTAGCTGGGAT  
 TACAGTCATGTGCCACCATGCCAGCTAATTTTGTATTTTAGTAGAGATGGTGTTCCTATGTTAGCC  
 AGGCTGGTGTCAAACCTCTGACCTCAGGTGATCCGCCACCTCAGCCTCCAGAGTGTGGGATTACAGG  
 CGTGAGCCACTGTGCCCGGCTGCTAAGGCAAGTATTGACCATAGAGGAGATGACTAGTCCAGTGGCA  
 GGCTTTTCTACTGGGAGTCAGCCAAGAGCTCCCACTCTTCTGGTTCCATTGTTCTCTGCAAAAGTTC  
 CATTCATAAAGTGGTTTCCCATTTGATTGTCCAATGATGCAAACTCCAGTCTTTTAGCACTGAGTTT  
 CTCATAGCCTTTTACCATTGAGTTTCTCATGGCTAATGAATGCTAATGAATTGGCATTCCGATTTATCTA  
 TAGGATTCCATGATGAGCTAGCCTCATGAAAGAGGTTCCACTCCCTCACTGTGGGTACCGTCTGGGAATTAG  
 ACCCTTAATAGGAGTAATTCAGCAGGCAATGTCTCTCTAATAACACTCCAGTCTCACTGAGAGCTTCTA  
 TTCAAAACAACAATCTAAAGGCTACAGTGTGACTTTCACTAAACTGAAAAAGAATAGAAAATGAATG  
 TATGTGATGTACACATTCAATGTTTATCCCTAAATTCATAGCAGATTATGACTGATCATTAAG  
 CCAAAATTAAGGGGGCAAAATGTATAAAGCAAAAGGAACCTCTTAGGCATAATAGTCTTTAAAGTAAACA  
 TTAATACTGACAGTTGCTTGTGTGAAGATATCTTTATTTAATATGGTAAAAAGAACACAGGAATTGCTA  
 GCACCTTACCGTATGTCCATTTTATGTCCACCTTAAATAGATATGTCTGTATAGTCATCAGATTAGCACT  
 TTAGAATTCAATAATTCAAGAAATCAGAATGGACATTACATGTGCTTATCTGGCAGGAGAATTG  
 AACAAATCCTTTCTATAGGAAATGTAAATTTCTAATAACTCCACAGGATTGTAAGACTTGGGCTGGTA  
 ACTTCAGTGAATACAGCAGAGTTTGGGCGATGGGAAAAGGTACAGTTGTGTTCTTAACTCTTAACTTTG  
 TGAGGCACTGACTTTTATTTCTTCTCATGATTTTGCAGTAAGTTTCAGTACAGTGGTGTAGTTTCACTATAG  
 TTCAGTGGCTAAGCTTTTGGAGGGACAGTTCTATGTTCTAATCACTTCTGCCACTTGTGAGAAAGTG  
 ACTCTTGTCAAACATATTGGCCCTTTCAAACCTCAGTTTCTTCTCATCTGCAAACTTTTATCATGGGGTGT  
 TGTGAGGGTTAAATGAAAAATATGTAAACTCATCAAATTTTAAAGCACAAATACCAAGTCTCAGCAGA  
 ACACATACAGTAGGAGTCCAGCCATTAAATTTTGAACAGGCAGAGGCAAAATATTTTGTGTTAGAAGTA  
 CTTGCATTTTCTAGCTCTTTGGCTGAGTGGACAACATTTTGGTGTCTTTTCTTATTGTTATTTTTTAA  
 AGCATAGCTATATGTTATGTAGACTCTTTTGTATGTATATTTAACTACAATAAATATTATATAATAGAA  
 AGAAAGATATACATATATGTGCACATACACTGGTAAGCCCCAATACACTGCCTCATTCTAAATGACTC  
 TAGCATTTGTAGGACAGTGTCTTTTAAACCTTTTCGCACTCACGAGATACTCTGGGGAGCTTTAAATATAT  
 GCTGATGCTTGGGCTCCACTTCCACATATTCTGATTTAATTGATTAGGGGTTCGGCTCAGGCATCAGTAT  
 TTGTAATAAAGCTTCCAGCTGATTCTAATGTGAAGTTAAATGACGGATACTGATACCGATAAAG  
 AGTGAGTGCAATAGACACAAAACAAAATAGGAGATGTGTCTCAACAATGGTAAGATTGTTTTAAAAATTA  
 TAGTACAATTAATAAATAATGTAATGCAATTATTTAGAAAATCTTACAATTTTGTATTTTGAAAGCAC  
 CATGTGATATCATGGGAAAACAGAACTTTGTTGGATTTCCTTAACAAAGATTTTGCAGCTTGGTATC  
 ATTTCCATTTTGTAGTATTTTGTATCTCAGGAGATGAAAGTGGGAAGTGGACAATTGCTTATAAGGCCAT  
 GCTTTGCACCAGGGTGTCCAGATGAGAGGCAAGTGGAGGTAAGTTTAGCCTGCATTCTGTTCCCTAAG  
 GTACATCTCTGTTGAGGGGTGGCTTCTAATCAGGGGAAGAAGTCTATGTCTGTTTCTTAAATGCACGC  
 ACAGGTTCCACAAGCCCTCACTTTGTTCTCAAGAGCATAGCATTTATTTTGGTGTCTTAAAGCTGCTGAAT  
 GTCACAAAATAATTTTCCAGCACAAACAAATATTCAAATAGTTATGTGCACAGCCTGTTTGAACACC  
 AATAAGTTTGGCTCTGTGGCTGTTTGGGCACTGACATGGTTTGGCTCTGTGTCCCTACCCAAATCTTA  
 TCTTGAATTTGTATCCCCACATGTCCAGGGAGCGACCTGATGGGAAGTGATTGGATCATGGGTGCAGTTT  
 CTCCATGCTGTTCTCATGACAGAGAGTAAGTTCTCAGGAGAGCTGATGGTTTAAAGTCTTTGGCAGTT  
 TCCCTTTCTCTCTCTCTCTCTGCTATGTAAGACGTGCTTTGTTTCCCTTTGGCTTCCGCCATG  
 ATTGTTTTAAGTTTCTGAGGCCCTTCCAGCCATGTGGAAATATGAGTCAATTAACCTCTTTTCTTTAT  
 AAATTACCAAGTCTCAGGCACCTAAACCAATTAGAAGGTGTGCCATTGGCACACAGAGGGTCTGGTGT  
 CTCCCCACCATCCAGCCACCCTCTGCCAGGTGTGAATGTATTAATATTGCTGGAGTGAAGGTAAGG  
 AGGCACTCTGCAGAAGGGCACTGCCACTGGGATGGCACAGGAGGGCGCTCGAGAGCTACCTTAGT  
 ACTCTATCAACTGGTGAAAAATTTAGATATTTTCACAATCAATATGGCCTTGCTTGTATATACAGGGTG  
 ATTTAAACTCTCTTGCACCTTATCACAGAAGTCGAAGTTTTCATCATTTCTTTTCTGTATTTGGTTTAT  
 GTGCAACAATATAGGTTTATTTCCAGTTCTGGAAAATAATCATGGTTAATACTGACTGAGAACTGATCA  
 TTTCTTTCTCTTTATACCAACCAATGGGGCAGGTACCATTTAAAGGGGGAGGAAATAGAGGTTAA

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TAACATGCCCCCAATCAGTAGTGGGGAAATGAAAGAATCAGGATTCAAAGCCAGGTTTGTCTGGGTCTTG  
GGACCAGCTCAGCGTCTGTGCTACTGCCCGGGACTCCTGCTGCCAATTCTTTCTACCTCATTATCCCT  
CAACCTGCACCAGCAATCCACAGGGCGTGAGATGAAGAGAAGAGAGGACCACAGGCGAGAAAGTGGCA  
GCAGCAAGAGAAGATGTACCATGAGGAAGTTCTGGGAGGTTCTGCCGCTCTTTCTGAGAACAGGGGAGAG  
ACAGAGCTGAGTTACAACCTGCACTGCTTCTTAGCTTCTTAGTTTCTCTTCAAGAAATAGTGGCAAGAGA  
GTTTTCGAAGTCTTTAGCATGTATTAAACGAAGAATTTGTTTATAAGAAAAATGTGGATCGTTCCCA  
TGTTTGTCTGGAACCTCTTGTAACTTTTGTGCACTAGTAAATTAAGTCACTGTTTATCTGTGTAG  
TGGAAAGCATGCTTAACTCTAATCAGGAGACCTGATTCCAGGAATAGTTAAGCCTGAGTTCATTATAA  
ACCATTAAAGTTATCTGTGTCTATTCTAGTCTGTAAATGGAGGGCTTGGCTGGTTTCTGTAAAGT  
GGGATTTGGCTAAGTGCTCTTGGATACAGTTGCTCACCTCTTTGAGCCTCAGCTTCTTTTGGTGATTA  
TTTAATCGCATGTGATAACAAATACAGGGTGTCTTGTGTAATGCCCTGGAATGGCACTGAGATTGCTCCA  
CTACAGTAAGGAGGTGGTTTAGAAATTAGCTAATTTATTAATTAATGGCCTATAGAGCTTCATGTAGGTT  
GGTACTTCAAAGTCCCATTCTATATGGATCATGTTTATTTATATATCATCACTTTTATTTCAAATCT  
CTTTTCTGCTGAGATCACTGAGATTCTAGAAAGCAGTCTATTGTGACGACCTTTGCCAGTACATTT  
AGTAAGAAGTCTGACTAGCATTGACTCAACAGTTCTCTTAGAAGGGCTGGCACCCTTTGTTTCAATTTT  
TTAAACATTAAGTCCCATAAATTAAGCATGAATGCACCTTTCTTTGGATTATGAAACAAATCAATCA  
CAGACATGGGAATTAGTGTGTCTCTTGTCTTGTTCATATCATGCATTTTTTGTCTGAGCTTTCAC  
TGTGTCCCAGAACTGTGCTTGGTGCTAACAGTGGCCCCACAGAGTACGGCTTTATATCAAGGAGATGA  
CAATCTTGTGGAGGAAAAACCTTATACATAGAACAATTAAGGAACAATGCAAGGGAACACACATTTGCA  
AGTTTTGATTGTACCTATTTTATGGCTATGGTATAAAACAAAGCACCTGTTGTTCTGAGAGTGAAGGGA  
TAAGACAATAACTACAAAAAGGTGAATGAGTTAATTCAAAGGGAAACATTGAGCATGTCATTTCTCTAT  
TGAAGTGTCTATTATTTGGTATCGGCTTCTTTGGTGGTGTGGTTTTGATTCCCTCTGCCCGGACTCT  
GTTGTTTAAAGATGTTCTTCTATGAGGATCTTGGATGCATTTTAGCAGTGTTCCTGCTGCTTGT  
TTATATTCTTTGATGCCATCCAGGTACATCATTCTTGTCTAGATGAGTAAAGGTAAGCATACTTAGAA  
GTCAAAAAGAAAGGCTGAAGTGGTACTTAGACTTGAGAAATTATAGATTCCATGGAGAAAACGTGTGT  
TAAATCACAGGACAGGCTGAAAACCTACATTACCACCTGATGGAAGTGAACCTTACTTTTATAGGTTACT  
AGGAGAAGGTGAGCTTCTGTAAAGCAGATAAAACAAGGATACCATTAACAGAGTTTCAAGTAATTTAAA  
TTAAGAACTGAACATTGATACTGATATGATTTCTAGTTTATTATCTGTGACAGAACCCAGTAGCTTATG  
AAAACTATCATGGAAGAAATAACTAAGAAATAACCATTTAAATATATCAGGATATAATGAGGATGAAG  
CTTAGATAACACAAAAAGGCAATTTCTCTTTAGGCTGAAAAATACCAGACACAGATATATCGACAGAGT  
GACCTGCCAGAACTCTTCTGAGGGCTCTGATAAAGGTCAACGATTGAACACCCAAACACGTTGAT  
ACACACAGCACCTGCCTGATGAAAACCGTTAACAGTGTCTTCTCAGCCAGAGTGCATGTTTCTTAA  
AGTTTTGAAACAGTAATCTAAATTTCCCTATTCCATGAGTAAAGTTCTACTTTTTCTTTTACACTA  
AACAGCATTCGATGTTTGTAGCTGAAAGTCAATTAAGAAAAATGTATTGTGCTGTGTTTTCTGTCTTCT  
TTTTAAGCACTCTAAAAGAACTTGTCTTCTCTCTGAAATTGAGAACGAGGTAGGAATGAAAGACTGAAA  
CGGTAACCTCTCATCATAATTTTATTATTATGACAAGTTGGGTTTATGAAGTATTTTCCAACTACTGCCCT  
CCAATTGTTAAATAGGTAGATAACATGCCAGCTTAACTGCCAAAACTGTAGTCTTAAATATTTTT  
TGTAGTATTACTATTAGTATCATGAACAGAAATAGCAGTGATAAAATCAATCAAGTTTGTGAACACC  
AAAATGCCAGAACTCTGTGTGTGGAGGTTGGTTTAGGATTGGTGAATTAATATTCTTTGCAACGGCTG  
CACCTAGCATGGTCGCCCTGAAGCCCTGGGAGTTCTCTAATTTTCTGCTCGAGAGACTTCCATTAAAC  
AAGAAAAATGAGGTGGGAAAGGTGAGAGGATTACAGGGTAACAGGAACCTGGACCTGAACCTGAGCTTCAT  
GCAGTCCGCAGATTTTTTAAAGTGGTTGTTTTTTAGAAAGTGTGTCACGACCTCTAAATCATTTGTTAAT  
TTCTAGTTAACTGGCCTGAGAGATTTTGTTTTAAAGAGACAATGCAAGTATAGAGATCGTGATCTCT  
GAACTCAGAAGCCAGAACTCCAAAGCTGGAAGCCACCAGATCCTAGCAAGTGAAGCTCTGTCAATCTGG  
AGCCGAGATTTTGACACGCTGTGCACAGCCTCCCATCTGGGCAAGCCCTTTTCTCTCCACCCTCCACT  
CCACAGCTTCTGTTCTTTTCTTTTCTTTTCTTTTCTGCTGAATTCATCATCCCTCCCTTTCCCATGCCGA  
GACTTAAAGGTTTCAAAATCTTCAAAAATCAATGATTCTAAATCAGCTCAGATGACTTACATACAATG  
TTTTATTACATTTTCCAGAGCAGAAATGGCATATTAAGAAATGGTTTTATTTTCAACTATATTTTCTCT  
AGGAATATAGAGACATTATCTCAAATTATTACCTCGAAGAGACAGAGACAAGAATTTGCAACCATTTAG  
TTCTCAAATCATTTTAGGTATTTTATTTTGCCTAAATCTCTTAGACGTTATTTCTCGTATCAC  
TTAAAAATTAACATTTTACTTGGGAGGGCTTAAAGAAATTACATTGAAAACTAAGAAATATTTGGGAAA  
AATTCATTAGCACAACTATCATGATCAGAAGAAATGGCTAATTTCAAGTGTCTTTTCTTTGGGCTCTT  
ATAGAAAATTTGTGAAATGTGTCTTTTATAAGTAACTGGCATTCTGAAATTGATTTAAAGCTGTAGAGGG  
GAAGAAAAGCTACATTGGAAAAATTAATCTTAGGTTTGGAGATATTTTAAAAAACAACAAGTTCCAT  
GCCCAGAGGAGTGCAGACACTGACCTCTTTTTCAGCTATTAGAGGTGAGGAAAAAAGTTGTGTGGTTG  
GTGTGGAGAGAGAGACACAGCACTTCTTTAGCCATCATCTACTAACACCTTACAGTACATTTTCT  
TTGCTAATAATCCCAACCATTTTACAGGGAAGGTGATGTCTCTGTTGTTGTTAGAGGGCCACCCA  
AGGAATTCAGGTTCTGTTGAGTAAGAATGACAGAAGTACCCACAGCTCCTGGGCCATTGGTCTCTCTTA  
TCCAGCCTCCACTGACCTTGTGGTCCACTGCACTTTCTTCTTGAATTAATCTATGAGCTCTCTGTT  
CCTTCAAAGTACTGGAGCTTCTGGCCTTAGCACATCTGTTTCTGACCCAGAGCACCTTCACTGAGAAGC  
AGACCTCTACTTGGCTGGGTTCTTACTCACCTATTGGTGCCTCTTCCCATCCCCCTCTCTCTCTCT  
CCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCCAGGGAACATATAGTTGGCAGCAAGGTTGCAAGAC  
GAATGAAGGCATGATGAAATGCACATGTTGGAGGACGAAGGTTCTGTTTTACTCTCAGTGCACCAAAAC  
CCAGCAGAGTTAAATAGTGAAGGTTCTTAAGTGCTCAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG  
GTGGGAAGGGCTAGAAGGAGAAGAAAGGAGAAGGGAAGGAGAGAGAGAGGTTGGGAAAAATGGAA  
GGGTAGTTGAATGTCATAGCAATTAGAGTTAGAAGAGGAGAATTAGTAGAAAAACAGAGTGAAGTCAAA  
AACAGAGTGAGACAGACAGAAATTCATAGATTGCTGTCTGGCCAGATCTCATTGGATAACTAGAGCCT  
CCCTCTCTCTCTTGGGTTGAATGGTCTTTACTCATTCTTTATGTAGACCATCTTACTTCCACATGGAG  
TTTGTATGTTCCCATAGACACCAATCTTTTACATATCAGAACACTTGTCTTTTATTAATAATTTGTTTT  
TATTAGTTTCTTTTCCCACTAGACAGTCAATGTCTGATGAGGACTATAGGGTCTTATCTTTTCTATC  
ACAGTAGCCCTCGAACCTAGCACAGTGAAGTTGCCCATATACTACTAAATATTTGTTGAAAGCCTA

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AAGCACTGGGCAATCATTTTGACTTTCCAGACTTCAGGATCCCCATTGTGAGGGAGCTGGTCTATTTG  
 ATACCTAAGACTFCCCTCCAGCACAGGTCTTCTATAATTTGTATCTACATGGCTTCTGCCTGATGCCA  
 GGAACCTAAGATTTAACTCAAGAAGACAGGATGTTGCTTGCAAGACCCTGAAGATCTTGTATCCAAA  
 CTGTGACTGCCGTGGAGACTGTTTATACAGGATCTTGAAGTGGGCTAGGAGAGTGCAATGGATGGTAGTCC  
 CAGTCTCTGTTTGCAGGGAGAGGAACACAGCGACAAAGCATTCTATGGAAGAAGGAGTTGCTCATAAG  
 TCTACTATGGACATCAAAATATGCTGATGAGCCACAGCAAGTTCATTACAAAGGGATTTTCAGATAGAAGC  
 CTCCTCCTTCAGAGTGAGGAGGAAGATCATCCAGGAAAGAGAGAAATATGTGTATTTTCATATATGCT  
 GTATGTACATATTAATCAGCCAGCAATATTAAGTGCAATTCATGGGCAAAATGCCAAAGAGATGAAGAGA  
 AAAATCAGACTCCAAGGATCATATAATCTGATTGTGGAAGAAAGGCATATTTCATCATGAAATGTAGCAA  
 AGATGTTAAGTGAGTGTCTTAGTCTATTCTGTGTGCTATAAAAAATACCTGAGACTGGGTAATTTACAA  
 AACAAATTTATTTCTCGTGGTTCTGGTGACTAGGAAGTCCAAGATCAAGGCACCAGCAGATTGGTTGTCGG  
 ATGAAAGTTCAGTTTCTGCTTCATGCTATGGTGCCTCCAGAGGACAGGAACACTGTGTCTCATATGGCAG  
 AAGGTAGAAGGGCAAAAGAGGAAAAACCCCTTTTTTTTCTTTTTTTTGGAGATAGAGTCTCGCTCTGTCA  
 CCCAGGCTGGAGTGCAGTGGCTCGATCTTGGCTCACTGCAAGTCCCGCTCTCGGGTTCATGCCATTTCTC  
 CTGCTCAGCCTCCTGAGTGTGGACTACAGGTGCCCCGCCGCCACCATGCCTGGCTAATTTTTTTGTA  
 TTTTTTAGTAGAGACGGGGTTTACCCTGTTAGCCAGGATGGTCTTGATCTCCTGACCTCGTGATCTGCC  
 TGCTTGGCCTCTCTAAAGTGTGGGATTACAGGCGTGAGCCACTGCACCCGCCAGAAAACTCTATCAG  
 TTCCCTTTATAAGGGCACCTAATTTTCATTTCATGAGGGAAGGGCCCTCATGCCATAACCTCTTAAAGCC  
 CTGCTGTATAACTACTGCGACTGGCACTCCTGAGTTTGGAGGGTGCACTTCAAACTAGAAAGTGG  
 GATAAGCCAGACACTTGGGTTTCTATGGGTCCTCTCCATTTGGTTTTCTGTAAAGATTAAAGAGAGC  
 AGAAACACTACTTTATTAGAGAAAGGGCATTGAACTTGGCTTTGAACATGGCAGGATTTGGCCACTTA  
 GAGATTGGGGGTGCCATTCCAGGTAGAGAGAAAGAGCAAGGAGAATGGAGAGCACTTGGCATTTATGAGAA  
 TAGTGAGGGTTTCATGAGGTACATGAGCTGACTCATGACAAATTAATTTGGAAGGCAAGGTTGTGAC  
 CAGGCTAAAGGCATCTGGACTTTGCTCTAGAGGAAATGTGAAACCAATTGCAGATTTCTGAGCAAGCTGTT  
 GGCCAGAGCCGTGCTTCGGGGCGACTCACAACAGTGGTAGGAAGCTCTTTGGGAGCTGGGAGAGAGAGAG  
 AGAGAGAGAGAGAGAGAGAGAGAGAGATGGGAATCCAGGGGAGAACAGAACAGTGAAGAAAGCAGC  
 TGCAATTCGGGCCCAGGCTGGGTTGGTGGTTTCTGGAAGGGGGTAGTGTGGGGGAGTGGGGAGAGGGG  
 TTAATGTGAGCTTCTGAGGAAGTACAGGAGGGGTGAATTCACCATGGAGAAAGTATTCAATAACAAGC  
 CTACAGAGAAGTTGAGGAAGGTGGAGGAGTAAAGGACAATGATGTCTCGAGAAACCTGCTCATGAAACC  
 TGCTCAAGTAAACCTGAGGAGGCAAAAGCCTGATTCTAAAGTGTGAGAGAGCAACAGCACAACTGGGGA  
 GGTGGGTATCAAGTCCGAACCAAGGGTGAAGGGCAGGGACTCAGGTGCTGGAGTGTTCATGTGGATC  
 TTGGGGTTGGCACTTGCTTGCTGAGTTACCTTGGGCAAGTTACTATGTGGTCTTAGTTTCTGTAATAATGG  
 AGATCATGATGTAACCACTTGGTAGGGCTGTTGGAAGGATGGAAGGAGTTCAGAAACAGAAAGCTCCAG  
 CACAGAACCTGGCCCGTAATAAACAGTCTATGTGTTGCTATCACGAGGGTACTTTTAAAGAAATTTAGT  
 GCAGATGAGTATAAATGAGACGTGGAGTGAGTAGCAGAATCAACACAAGGTTTTTCTTATAATGGATGAG  
 AGATTGTAAACACATTTGCATTGGGGAGAAGGACACATGGGAGAGGGAAGAAATGGAAGACACGGAGA  
 TTTGTTGGAGGCAAAATTTAGATCCACGACAAAAGTACGGGAGTAAAGTGCATGGGGAAAACCTAGTATTGG  
 AGGGAGGAAAAATGGCCTCACTTTGCATTTCGAATAACATCTACTTTCTTTACCTGGTCTCCAAAGGCC  
 ACCAGGCCGACCTCTGGCCTGTTTCTTTAGCCGTAACCTCCTCATTCTCCCGCGTGGCATTGTGCACAT  
 CTTGCATTTTCTCAGAGCTGCCAAGATGGTCTGGCCGGGGCTTCTCTAGCTAGCCTATCTTCTGTCAG  
 AGCCCTTCCCTCAGCTTCTTACTTGCTGAACTCTGTTGCTTTACCCAGCTCTCACTTTAAATTCGGAAGT  
 CCTTCCCTGACCGTCAGGTCCAAGTAGCCATTCAACATTCTTACATTACCCGTTTTTCCATCTTTACA  
 TGGCATGATCTTCACTTGGTGATTCTGTTTCTTTATTTATTTATTTGGTGTACTGCTGCCTCTCTTACCA  
 ACGTATAAGCTTCATTACAGCAGAGACCTCTTGCTGGTCTATCACAGTATCCTTGGCTCCTGGCACATGG  
 TAGGAGCCAGTTAAACGTTTGTGTAATAAATAATGAATACATCCTTCTGTAATATGTGAGAAAAGTGG  
 GAGGCAAGTCTAGGTGAAGAAGGCATTAAAAAAAATTTTTTTTGGAGACAGTCTTGCTCTGTCACCCA  
 GACTGGAGTCACTGGGACGATCTTGGCTCACTGCAAGCTCCACCTCCCGGAATCAAGTGATTTCTCATGG  
 CTCAGTCTCCTGAGTAAGTGGGATTACAGGCTTGGCCGTTACACCCAGCTAATTTTTGTTTTCTGTTTTT  
 TTTTTTTTTTTTTTTTTTGGAGCGGAGTTTCACTCTTGTGCGCCAGGCTGGAGTGCAGTGGCGCAATCTC  
 GGCTCACTCCAATATCCGCCCTCCCGGGTTCAAGCAATTTCTCTGCCTCAGCTTCCCGAGTAGCTGGGATT  
 ACAGGCCGTGAACACCATACCTGGATAATTTGTATTCTTAGTAGAGATGGGGTTTACCCTGTTGACCA  
 GGCTGGTCTCGAACTCCTGGCCCCAAGTGATCTGCCTGCCTCGGCCTCCAAAAGTGTGTGATTATAGGC  
 ATGAGCCACTGCACCTGGCCGGAAGACAGATTTTGAAGTGGAGAGGAGTTAGAGGAAATTTAGTCAACT  
 TAATTTTATCTGAAATCATGAAGTAAATAATACATAGAAAGTGAAGGGGTGAACCTCTGGGTGTATAT  
 ATTCATAGGAAATAAATCAGTGTCAAAGGTTTTCTGCAACCCCATGTTCACTGTAGCATATATGCACAA  
 TAGTCAAGATATGGAATCGACCTGAGTGTCCATCAACAGATGAATGGATAAAGCAAATGTGGTATGTATA  
 CACTGTGGAATACTATTTCAGCTTAAACAAGAAGAAAATTTCTATCACTTGTGACAACGTAGATGAACCTG  
 GAGGACATCTGCTAAGTGAAGGAGCCAGGCACAGAAAGACAAATTTGTGCATGATCTCACTTACATGTG  
 GAATCCAAAAAGTTGAACCTCGTAGACACAGAGAGGAGAATGGTGGGTGCTGGGGAGGAAATGGAATGC  
 GGCAGAAAGGGGAGATATTGTTCAAAGGGCACAAAGTTTTAGTTAGATAGGAGGAGTAAGTTCTGGAGAC  
 CTATTGTGCAGCATGGTGACTGTAGTTAATAATGATGCACTGTATACCTAAAAATTTGCTGAGCACAGTAG  
 AACTTAAAGTTCTTTTTTAAATTTTTTATTTAGGCCAGGTGTGGTGGCTTATGCTGTAATCCCAGCAC  
 TTTGGGAGGCGGAGATGGGCAGATCACCTGAGGTGAGGAGTTCAAGATCAGCCTGGCCAAACATAGTGAA  
 CCTCGTCTCTACTAAAAATACAAAAATTTGGCCAGGCATGGTGGTGGGTGCCTGTAATCCCAGCTACATGG  
 GAGGCTGAGACAGGGGAATTTGCTCGAACCCAGGAGATGGAGGTTGCACTGAGCCTAGATCATGGCACTGC  
 ACTCCAGCTTGGGTGACAGAGTGAGACTCTCAAAAAATATTATTTTAAATTTTATAAATAAAGACAGGTT  
 CTCCTATGTTGCCAGGCTGGTCTCAGACTCCTGGGCTCAAGCGGTCTCCACCTCGGCCTCCCAAAG  
 CGCTGGGATTGACGGCTGAGCCACTGCACCTGGACAACTTCGAAGTCTTACCACAAAAAATGATAAG  
 TATGTGAGGTGGTAGATATGTTAATAGCTTGATTAAATCATTTTACATTGTATGTGTGTATCAAAATGC  
 CACATTGTACCAAAAAATATGCGGTTTTTATTGTGCAATTAAAAAAAGAGAGGGGACTATAGGCACA  
 CACCACCATGCCAGGCTAATTTTTTTGTATTTGTATTTTTTTTTTTTTTGGAGCGGAGTCTTGCTCTGTTG

FIGURE 1, sheet 7 of 94

Year	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020
Population	1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000	5,500	6,000	6,500	7,000	7,500	8,000
Area (sq. mi.)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Population Density	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80

GGAATTAATGTGCTTGATGACAATATCTCCAAATGATTTTTAAGGCAAGAAGAGAGAATGTTACTGACAG  
 GCCCATGGTCTCTGGGTGAGAGGGTCACTGTGAATGAATGTACACACAGAGCCTTTTATTAGTGAGGCT  
 TAGGGTGTCCGGTTTTCTTGGCGGAGTAAACATCCACCCAGTAGTATTCACTCAGTTTGCAATTGTTCTG  
 TCGCATTGTTTGTAAATCTTTTGAAGTATTACGACGATTTGTTCCCTATTGTTTCATAATACTCTTTAAA  
 AAGCTGACTATAGGACTCCAGTCCCCACTGGTTTGTCTTTGCCACTTGGCAAAGGTTGATGATTTTAT  
 TTTTCTTTGGCCTGTGCTTCTTAGTGGCTTGAATGAACACGGCTTTTTTCTCTGTTTACCCTTTGGC  
 CACATTGTCAATAATAGAGTCGCCCTGGGAAGCAGAGTTTGCAAAGGGAGGAGGGTTTGGTATAAATTTG  
 GAAGATTGTATTGTTTCAGATTTATTTTCTCAAATGCTGAACTGCTTCTCAGGGGTTATACTTCTTTAC  
 TCATGAAAACCTCACACATTCTCTTAGGTGGTACTGTTAAACATGTTACATCTGTAAAAAATTAATAAAA  
 CGTAATGAAAGAAGCAGGAAGCAGGTATACACATGGTGGCCTGAGCAATTGGCTGTATGGTTTGGTT  
 TGATTATAGGTGTGTGAGGCACATGTATGGTGTGCGTGGAACAGATGGATAGAAGTGGTAAAAAAGATG  
 AATCCAACCTAGTGCTTTTCAATTCTCTTGCACATGAGAATCACCTGGAGAATTAATAAATAATACATTG  
 ATGCCGACTGGGCACAGTGGCTCATGCTTATAATCCACGACTTTGGGAAGCTGAGGCAGGTGGATCACT  
 TGAGGTGAGGAGTACGAGACAGCCGGGCCAACATGGTGAAACCTGTCTCTACTAAAAATACAAAAAT  
 AGCCAGGTGTGGTGTACGCTTATAATCCAGCTACTTGGGAGGCTGAGGCAGGCAAACTCTCTTGAAC  
 CCGGAGGAGCAGAGTTGCACTCAACCGAGATTGTGCCACTGCACTCCAGCCTGGGCAACAAAGCGAGACT  
 CCATATTAATAAATAAATAAATAAATTTGATGCTGAGTCTCTCCCCAAAAATCGGAACATCTGTGGGTGTG  
 GTTTCGGCATGGATATTTGTAAAGTCTCCGTAGCTGCAAAGCCAAGTTGGGAACCACTGATAACCAACAG  
 AAAAAATGCTTCTGGAAGTGTTCGGGGGAAGGAGTCCTAGCCTAGGATCAGACACCTGTCTGGGCTCAAT  
 ACAAAACCTGGTTTTTTTTTTTTTTTTTCTGAGATGGAGTCTTACTCCGTTGGCTGGGCTGGAGTACAGT  
 GCGCAATCTCAGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCGATTCCCTGCTCAGCCTCCAGAG  
 CAGCTGGGACCAAGTGCATGCCACCACCTCCTGGCTAATTTTGCATTTTATAGTAGACAGGGTTTCA  
 CACTGTTGGCCAGGATGCTTGTATCTTGTGATCCCTTGTGATCCACCCGCTCGGCCTCCCAAGTGTCTG  
 AATTACAGGCATGAGCCACCACACCCAGCCACCCTGGGTTTTATAAACTCTCAGTAGGCCTCCTCTTCT  
 GGCTGGTCCCATGCTATCTGACCTTCTTGCATTCAAAAAAGTATTTTCTTTAGTTGAACCTCCAGG  
 AACATGAAGTGGCATTAAACAGAAGTATGAATTGCCTTTATTAATAATGTCAGTGGTCTTTTTCTTACCAA  
 AGGTCCTGACCCAGTTTGGAAAAATTTTCTTGAATGTGGGTGACACATCTGTTTCATATCTCCAAG  
 CAATGCCTCAGAGCCAACCTCCTCCCCGTGTGACTCAAGGATGCCACGTGTCCACATGTGGCCTGTTTT  
 CTCTCTTAACATGGCTTAAAGGCCCTTATGAACCTCCGTTAGCTTTATTTATTTATTTTGTAGATGA  
 ATTCTTGCTCCGTCACCCAGGCTGGTGTGTGGTGGCGCAATCTCGGCTCACCGCAACCTCCGCTCTCCAG  
 GTTCGAGCAATCTCCTGCTCAGCTCCCAAGTAGCTGGGACTACAGGCGCCTTCCACACACCCAGCT  
 AATTTTTGTATTTTATAGAGACAGGGTTTACCATGTCCGCCAGGCCAGGCTACTCTCAAAATCCCCGA  
 CCTCAGGCGATCTGCCTGCCTCAGCTCCCAAGAGCTCTCCTTAGCTTTGAAAGTAAAGCCAACCCCTT  
 TTGGCTGGCCCATGAGGCCCAACACACCTTAGCATTCCTGTTACCTCTACCACTCCTCTCTAACTCTG  
 CCTTTGCTGGTGGCAATTTGACTGCATAGTGTCTTTTTTGTGACTGCAGCTGTGCTGGACACTCCG  
 GTCTTTGCTCTTGTACTGTTCTGAGCTGTTTATGTCCAGAATGCTCTCCAGCAGTTAGCTACTTGT  
 CCTCTGAGTCTTCAGGTAGCTGCTCAATATCAGCTTCTCAGTCACCTGTCTGATCACCTGGCTTATAAG  
 TCCAGTCCCTACCTTGTACTCCCCATCTTAATCCCTGCTTAATCATCGCCTTAGCACTGTCAACCATCT  
 GACTTTCTTCTTATATATATTTTATTTATTTGTTAGCTCGGCTGCTTCAATAGATACCATAACTGGGTG  
 GCTTAAATCAGACATTTATTTCCACAGTCTCTGGAGGGTGAATCTGAGATCAGGGTGGCAGCATGGT  
 CTGGTTCTGGTGGGCGCTCTTCCAGGTGCAGACAGCCACTTGCTTTTTTTCTTTTCTTTTTTTTTT  
 TTTTTTTGAGTTGGAGTCTCGCTCTGTCACCCAGGCTGGAATGCAGTGGTGGCATCTCGACTCATTGCA  
 ATCTCCACCTCCAGGTTCAAGTGAATCTCCTGCCTCAGCTCCCGAGTAGCTGGGACTACAGGTGCACA  
 CCACCACGCCAGCTAATTTTTATATTTTTTAGTAGAGACGGGTTTTGGCATGTTGGCCAGGCTGGTCTT  
 GAACTCCTGACCTCAAGTGAATCCACCTACCTCGACCTCCCAAAATGCTGGGGGTCGTGAGCCACCACGC  
 CCGGCCAGATGGCCACCTTCTCCCTGTGCTCCTCATGTAGCAGAAAGAGATCAAAGAGCTCTTTTGTCTT  
 TTTATAGAGCACTAATCCCATCAAGAAGCCCTGACCTCAACACCTAATCACCTTCCAAAGGCCCACTT  
 CCTGTGCCATCATATTTGGGGGTTTGGATTTCAGCATATGGATTTTGGGGGACACAAATCTTTCAGTCC  
 GTAATAGTTGGCCTCCTCCTTGTTCCTAGTAATATAAGCTTCAGGAGGTGAGGATCTTTGTCTCTTT  
 TGTTTACAGCTATGTTTCTAACACCTACAACAATGCCTGGCACATGGTAGGTGCTCAGGAGATAATTATT  
 GGATGAAAAAATAATGAACCGTCTCCTCCTTAACCCTGAAATCCTGTTGAGTGCCTGGGTTTGGCTTG  
 CTCCACTGGGATGAAGTCTGGCTTGGTGTCTTGTCTCCAGGGGTAGACGCCCCGTCTCTGGGAGGAC  
 TTGAGGCTCTCCTGGCTGTGCTTGGCTCCTTACCTGTTCTGCCACTCAGAGCCCTGCCAGCTGCCT  
 GGGATGGCTGCCGGGACGCTCCTTGTCTGCTCAGTCAACAGTGGGGCTTGGTTTGGACCTTCACT  
 TATTTCTCTGTGAACCTACCTCTCTGGTCCCGAGCTCGTCTTCTGAAATTTTGTGTTTGGTCAAGCCC  
 AGTCTTGTGTTGCACATCCCTGTGAATGATTCTTAATTATATTTCTGGCTGGCTCTGTGACAGTAGACCATA  
 GAAATAACGATTGTTTCTGGGGTTGCGCTGGAGTGTGAACAGGTGGGGAAATGCCTCAGGACGATTGGA  
 CCGAGGAGACTCTGAGATGACTGATGAAAGCGACAGCAAGAGCTTTCCACGCTCCTGATGGCAGGAGGGG  
 ACGGCGGTGCTGAGGGGTGGGGGAGGCTCAGGGGGAGCTGTTGAGGGTCCCGTGTCTGCTCAATTCTCTAG  
 CTCTCAGGCGCCTTGATCTTGTCAATTTAGAAGCCTCTGGAAGCACAGGGACTGTGGAAGTGGAGGCTG  
 TTCTTGGACTATTTGCAACACTTTTCTCAGGAAAAAGAAAAATAAAAAAGCCTCATTCTCTTCTG  
 CCCAATGTTACATAATCGAACATTTCCCGTCTGGTTGAAATGAATATCCTCTTTGCTGAATAAATAA  
 TGCACAGATTCTTGGGACAGGCTGCTTCTCCAGGCCCGCTTCCAAGGATCCGGTCTGCTTGTGGG  
 TTTAGTGGTGGCCACAGCTGGACGCGGGTCCAGCTTGGGGTGGGGGAGGCGGTCTTCTGCAAAAT  
 GTCTTTTAAACGCTCTCAACAAGTAGCAACAAGCCCCACCTGCGACAGTTGTAGTGATTCCGGAAGACC  
 TGCTCACCACGAGGTGCTGGGGTGGCTTGCAGCTGGCAGTCTCCGGTGGCTGCAAGTTAAATAAATCTCC  
 TAAGTGCAGAAATCACCACACAGGGCGCGGAGAACTGAAAGTTAAACATCTGGAGTTACAAACACTCA  
 CAGGCCATCAGCTGTCTGAGTCCCCGTAGGAAAACTGTTATCGGATGCTTAGTATTCAACCTTTTAT  
 TTCCTAGCACAGGTTTTTTGATTTTACATGGAGTGTGATTATTTCCCATGCCCAAGTCACTGTTTT  
 CATAGCCTGTTGTTAATCTGTGTGCACCTTTGTTTTCACTCTATTTCTTTGCTTTCTATATAGAAA  
 AATAAATGGACCAATTGAATTGCAGGTAGAGGCTGATGCTATTCCAGGTGCTCAGGTTGGCTTTCCCAT

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CTTTCGTTTCCTCCTGTAGGAAGTTTTCCTTGGTATAAAGGGAAGGACAGAATTGGATCTCCCTGGAGGG  
AGTTTCATGTGTTTCTTATCTGAGCTGCCGGGAGCTGGTTTCACAGCACAACTTGATAATTGCTGAGTAG  
ACCTAAAGTTTGGAAAATCAAGATCTCTTTGGAGTTTACAAGTAAATTTCAAAAATGAGAAATGACTA  
TCCCAATTTATTTAGAGAAAGGTGCAGCTTGTAACTTTTCATGAATTTGGTAAAAGGGGCTAATTTG  
AAAAGGAAACTAATAGGCAATATTTACAATTTGTGAAAAATATCAGAAATAGTATACGTGGGAAGAGTTAT  
TAGACATTTCCATTTGTCAGTGGTAAACCCATTCCTTTGATTCTGAATCTTGTAGGTTTCCTTAAGAATT  
TGATGAAGTTTTCAGACTCTTCCTTCAGAAAAATGCACATATTTCTATGTACCTAAATGTTTGGATATGA  
TTTCAGGGGATTCCAAATCCCCTGGGGACCCCCATGTGGATGTTTGTGATGCAGAAATGGGGTAAGAAAA  
CCAGGAGAGCCTACAAAAATTTTATGAAATAGAAATATGAACATACAGTACTGAGCCAAAATTTAGTTGT  
GAGGAAAATGATGTTAAATGCATTCATTTTCTAAATGATGACAGAAAATAGACTCATATTACTATCCGG  
GTGAAGCATATTTTGTACTTATGGTGACCTAGTGATCCAAATGCCTGCTCTTGGTCTTATCCTCTTATC  
TTCTTATGTCAATACTGGGCTGCTTAAATATGACTGTCTCCGATGTCATTATCTAGTTTGTCTTTG  
TTTTCTATGTTTATCTTTTACTTCTTGTCTCTATTTCAAATACTTTGACGGTATTGGGACTTGGGGACA  
TGCTCTTTCCAGTACAGATTTTGGTATTTGTAGAGGGAGGTTTACAAGCCCAGGTGGGTGTACTTGGGGAC  
TGAGGCTGCTCAGTAGCCCTGTAAATGGTCAGAGTCTGCTGTTTCTGTTGCTTGGAGAGCAAGGTGAATG  
CAGGTCTCTTTGGATATTGGGGATGATAGAGGGATGTGGATTGGAGAGGAACAGGACTTCTGCCCCCTC  
AATTTAAATGGAGATTCATTTGATCAAAAAAAGCAGCATATATTACCAGGCCCTGTGTGAA  
CTACACCTTGGATGTAGGTGGAGTAAGCCATATCCCAGGTAGCCTGCAATCACTGCAATCCATTGGT  
GGTAGGAGGCATGGGAGATACAGAAGTAACCTAGGACTAGATTGAATTGGCCACTTATCTAAGAGTGTTA  
TCAAGTGTCTGTAAATGTGTGAATTTCTGATTAGTTATCAGGTTGTCTATACATTTTTTTTTCTTTTTTT  
TTTGAGATAGAGTCTCACTCTGTGCCCCAGGCTAGAGTGCAGAGGTGCTATCTCAGGTCACTGAAACCTC  
CACCTCCCAGGTTCAAGCAATTTCTCTACCTCAGCCTCCTAAGTAGCTGGGATTACAAGCATGTGCCACC  
ACGTCTGCTATTTTTTTTTTTTTTTTTTTTGTAGTTTGTAGATAGAGATGGGATTTCACCATGTGCCCCAGG  
CTGTTTTGGAATCCTGAGCTCACTCATCAGCCACCCCTGCCTCAAAAAGTGTGGGATTACAGGCGT  
GAGCCACCACACCTGGCTACGTGTCAATTCATTTGTCTCCCTTCTAGACACAAGCTCCTCAGGAT  
CATATGTGTTCTTCTTCTTGGCAGAGGAGATGCTTCAGTAGTGCTTGTGTCTAGAGGAGAAGGGTAC  
AAGTGGCATGTGGAGAGATTACAGAAAGGGTAGAATAGGATGATGTTGGGCCATCAGGAAGGTCTCCATG  
GAGAAGGTGTGCTTTGAGATGAACACTGAGGAAGTGGTGGGATCACACCTGACCTAGATAGAGAAGGGGC  
TGAATCCAAGCATAGGATGGTGGGAGCAGGGAAGAGAGGTTGACTGAAGTTGAAGGCTGGAGAGGTTG  
GCTGGAGACGGGTGATCAGGGATATGGTAAGTGGTTGTGCTTAATTTAATCTTGCAGTAACACGGTGAG  
GATGATTAAATCGGGAACATAATCTGGTAAGGTATGTTGGACGGATTTCGAAATGGTAGAGGCTGTCCGGA  
ACCAGACCAATTAGGACACCATTTGCAAAAGTCCAGCTGAGAGCTGAAGAGGATCTGACTTGTGACAGGGA  
GTAGGACAAACAGGGATGGAGGCTGGAGGTATTTTGGAGATACAGCCTGCAGTTCTTATAATCCAACT  
TCCCCAGAATATCTCAGCCAGGAATAAAATAGGATGAAACAACAATAACACAATAATATTTATCTC  
TGCTTTCTATCACTGTGTTGCAACCTGCAATTTCTTCTGGTTCTTCTTCTTCTGCGGGGCCAGGTGAACAG  
GCAGGTGCTGAATATCACTGCTGGGCTCACAGAAGCCCCAGTGTGCGGGGGCCAGGCTGCGGCTGCTG  
GTGCAATCAAAAGCAGCCATAGGCAGGACCTCTTCCACTAGGTTTCATTGCAACCGGAAGGCTCAAG  
GCAGGCGCTTTCCACTGCTAATCGGTACCTGGTACAGGAATTAAGGCTTCACTTTGTTTGTCTGAGGGG  
TTTACAGAGATTTTCTCTGTAAAGCCACTGCTCCTTTCACTAAAATTCGGAGTTTGTGCAAGCTGGG  
AAGTTAACTTAGCAACAGAGTCTCTGCTGTATTTAAATATCATTTTGTCTGACACTGGCCTCCTTTTT  
TTTTTTTTTTTTTTTTTTTTTTTTTTTGTAGACGGAGTCTCGCTCTGTGCGCCAGGCCGGACTGCGGA  
CTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCCGCTTCCCGGGTTACAGCCATTCTCCTGCCTCAGCC  
TCCCAGTGTGCTGGGACTACAGGCGCCCGCCACCGCGCCCGCTTAATTTTTTGTATTTTAGTAGACAGC  
GGGTTTACCTTGTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCCACCCGCTCGGCTCCCAA  
AGTGCTGGGATTACAGGCGTGAGCCACCGCCCGGCCACTGGCTCTTGTCTTAGAGGAAATATGTGA  
ATTTCTCTTTCTGCTCAGAAGTACACCTTAGTAGTTGACAAACGTAAACTACCCGAAGGGCCAGCCTTC  
TCTGGATCTCTTGTGATGATATAGACCTTGTCTGCTGAGAAGTGTGTGATCTTGTGATCTGCTGATG  
TCTGGAAGAGTGGGAGAAGACTGAGGGGCAGATGGGGAGTAAGAAGGTCAGAAAGCTATTTTGGTTCA  
GCAGTATCAATAATGTTTTGCTTTAAATCATTTGCTTCTTCAATGTTGCTTCTTTGTCTACTCTGTAA  
ATATGATAGCCCATTTATCTTCTAATAGAAAATTTTTCATAATTATTTCCCTACATAAGATGTTTATGG  
CTTTATATATGTTGTGTATATAAAGAGGAGGCACATAATTTATGAAAGCAGATTTTAAAGCCTTTCTA  
CAGATGAAATGTAAAGTTCAATTGCATTTTTTCTTTTGGAGATGGGTCTTACTCTGTCACTCAGGCAAAA  
GTGCAGCGGCACGAACGTGGCTCACTGCAACCTCAAACAGTTCTCCACACAGCCTCCAGGTAGCTGGG  
ACCACAGACATATGCCATCATCCAGCTAATTAACAAATTTTTTTTTTTTTTTTTTTTTTTTATTTAG  
AGACGGGCTCTTCTACATTTGCTCAGGCTAGTCTTGAACCTTAGGCTCAAATTTCTGATTTCTTCCAA  
AAGTATTTTCTGCTTGACATTGTCAATTTGAAGAAAGATAGTTTAAAAAAATTTGAAGAAAGAGACTATT  
TTTATCCCTATAAGCTTGAACCTAGGCTTTTCACTGAGTAAAGACAGTATACAGTGTCTATTGAGGATG  
GGTCATATTATGGCTCCGTTGTGCAACACTCTAGATCTGGACACTGAAAAGTGGACTACTGATGGATTTT  
ATGCCCTGCTATAAAAACAGCACCTGGGGCTGGACGAGTGGCTCAGGCTGTAATCCAGCATTTTG  
GGAGGCCGAGGCGCGGATCACAGGTCAGCAGATCGAGACCATCCCGGCTAACATGGTGAACCCCGT  
CTCTACTAAAAATACAAAAAGAAATTAGCCGGGCTGGCGGGCGGCACCTGTAGTCCCAGCTACTCAGAA  
GGCTGAGGCAGGAGAATGGCGTGAACCCGAGAGGGCGGAGCTTGCAGTGAGCCGAGATGGCGCCACTGCAC  
TCCAGCTGGGTGACAGAGCAAGACTCCATCTCAAACCAACCAACCAACCAACCAACCAACCAACCAAC  
CAACCAACCAACCACTAGGCCCTGGATGCGTGTAAAGGTAGCTAAACACTCTTAGGTTACACTATTCTG  
ATGGGAAAGACCACAGAGGTGCCCTTGGATACCTGGTAATAAGGGCTATAGAAGAAATATGGAATTC  
TACAACCTGTCACTGACTATAGCCAACCATGCGGCTATAGCCAGACCTGCAATGTGCTCATGGGTCCA  
GAGCCCCCTATGTGTTATCTCAGCTCATGGGCTTCTCTGTTTCTGATAACTTCACTTGTAGGAGGCT  
TTCCTTACTTTGGCTCCATGCCACCTGAGACATGCCCTTGTCTTGTGCGGCTCATGACCTCAGTCAG  
GTTTCCAAATTCATACCCTCAGAGCTTGAATGATTGGTCCAGTTCATCTTTTTCACATTTGGTCATGTCC  
TAGGTCAGTGGCCAGTCTATAGTTTGGCTGATCTTGGTGGGTGTCTCCATGGTCCAGTTAGCTGTG  
ATCTGAAGTGGCGTAGGGTGGGAGGTTGTATGAACCTGAGTTGGTTGTTCAAGTAACAGGAGCTGAGA

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GCATGGCAATTTTCTTAGAACGATAGTGAGTGAGTGGTCTAGGTACTGATTGATATCTCCAGGTAAGCAG  
AGTTTCAATTTTGGTTGCTCTTACGAGGAAAGCCAGAAGCCAGAGCTGTTTGGCTAGAGTGATAGAAC  
TGAGATAGTGTGTTGAGCAGTGCCAGTGCGGAAACATCTTGTGCTGAGAAGAACGAATAAAGAATTTTGGCA  
ATTAACATATGTAAGTGAAGTCCAGACTCTGCTATCATCTGGGTGGCAGATAAAAAACACAGTCCAAAT  
AAAAAACCTGATTTTTATTTTAGCCTGAATCACCAGATCAGAGAGGATTTTGTGTTGAACAACCCAGA  
CAGATTGCATTGATTTTCTGCTTACTGTGCTTGTGGAAGCCAGGCTGTTAGTGGTTTCTTCTGGAATGG  
GAGAATGTATCAGAAAAAGGTTGGAACCTGAAAAATTTCTAGAATTTCAATTGTTCTGTGCTTCTTAATAA  
ACAAATGTGACACTATCAAGGAATGTGTGTTGACCCCTCTTTTTTAAAAAAATAAGATGTAGTGGATAGC  
ACAAATTTGATGAAATGTCAGGCTTTATTTTTTCATTTGAAAAATGTGTGTGAGGGAATCAGGTGTAATGG  
CATGATACATCTCTTTAAATTATCTTACGAGATTAAATTTGCTGTGTTCAATTACACTGTATTATA  
CTGCTTCATTTAAATTGTTGTTTCTTTTAAATTGTTCAACCTAATTGCTCTAATAGTGATGAATGC  
AATTTAATTAGACACTTTTCTTGAAGGATATATATATATTTTCCCTATAATAAGCACAGAAATAGTTTA  
AAAAATGTATTGTTCCAAAGCACACATTTTATTTTTAGTGATTTCATTAGAACAATAAATCTCAAATGA  
TTCATAACAACCTTTCTGGATTGATTGATGGAACCTGTTTTACCCATTCACTGATAAACCTGTCAACAG  
TTTCTCTCATGACACATACAAAGCAGGTGTGTTCCCATAGTGTGCTTGTGTGAATTCCTCTGTGCT  
GGTTCAGATTCTGAAATGGAGCTTTAAAGCATGGAGGCTTGAGTTGGTCCATGTGAGTTTGAACCCCTGG  
CCGAGCTGGTATGGGTACTTAATCTCAGTATCCACGGTTCTCTCAACTGCAAAATGGGTTTTAGTAG  
TACTTCACTGAGGTTGCTACAAAGATGCTTAACTAGTATCTGACATCTAGTACAGCCAGCCCTCCA  
TATCTGTGGGTTCCACATCTGAGGATTCAATCAACCTCTGGTGGATAAAAAATATCTAGGAAAAATAGCT  
GCATACTAGGGGAAAAAAAAGAAAAAATATCCAGGAAAAAATGTGCCAGTACTGAACATGACTTT  
GCTCTTTTCATTCTCTAAACAATATAGTATAACACATATTACTTCACATTTACATTGTTTTAGGTATTA  
TAAGTAATCTATGGATTATTTAAAGTATACAGGAGGATGTGCATAGGATATATGTAAATACTATGTGATT  
TTATCTAGGGATTTCCACATCTGAGGATTTGCTGGAACCAATATCCCAACCTAATACTAAGGGATGACTATATGCTCAGA  
AGACATTTGTTGTCATTTTTATCTCTGCACTCAAGAAAGCACATATTGGAATGCAAACGAATATCAAT  
AATAGTTTTTTAAAGGATAAATTAAGTTAATTTATAATTTACATACAAATACATTGTACATTTATTTTT  
CTAATGAAAAGGAAATAATCTAATACCTTCAGTTTCAAGAAATCATTAGCTGTCTTATTTGAGAACTGTTG  
CTCTATGTGTTTTGCTCTGTATTGATGTGTAAGTAACTGTTTTAACAGGTAGCTAAATGCTGTTTGAA  
AAGCATACTTCAACCATTTCTGGCACTAAATAATGAAAGATTTAATTAATTTAGAAAAAATTTCTGCT  
TTCAAAACACTTGAACGTGTCAGAGCATGTTATTCAATAATCTACCTTTACCAGAAATCATAATAAACA  
CAATAAAAAATGCTTACAGAACCCCAATGCGTTAGTATACATGATTATTCCTGTGTGAAGTGAATCTT  
GTTGAGATTGTTTATGCTCAGTCAATGGCAATTAATACTTTATATATTAATAAATGTCCTGCTCTAT  
GTATTCTGGAGAAGTTACTCTCAGACAAATTTACATATTTAAATTTTTATGGGCTAACTGATAAGTAT  
AGAGAAGACTGAAGACAGTTAAGATCATTTGATTTCAAAATGTTTTAAAGTGTGATTATTTATTTTGGTT  
TCTTTCTTTCCCATGCCAGTTTTGAGATGCACTCTTACTTGGCAGGTGTTCTCTGTACTGGGTACTG  
GGACAGCAGAAATACAGTAGCAAGAGGGAGATCCTGCCTCCGCCCACTTACCATTCTCACTGCCAGA  
AAGCCAGCCTTTTTTCAAGGCTTGTAGAGAAGAAAAAGAGAAATATTTTTAAAAATTCATTTAAAGTAC  
CTACTGCATAAACCACACCAGACATGATGAGATATTAATGTCAATATTATTAATAATTTTTATATGA  
TTTTACAGCCCCCTTGTCTACTTTAAATGTTTATCTTAGTGTTAAACAAACAATCAATAACCTCATAAAC  
TTAAAAATTTGCTGTCAGCAATACCGGACAGTTTATGGAAGGATCATATGACAGAGGAGGGCTGAAGAG  
TGTGAGAAGCTAGACCTCTGCAGGTTACCGAAGTCAAGAACCTCATTAATCGGTAAACAAGAGTGCAGAG  
CGGGCTTTTGTGCTCATGCTGAGTAAAGTCCCAAAAACACTCACAGAAGATATTTCTTGGCCCT  
GCTTTTAGTTTAGCTGTAGCTAACTTTGGATTAAACAAAATTTATGTGCTGAATGATGTTTTATTTTTTTT  
TCCAACCTGCATGCTGCTAGACTTCAAGCTTTTATACGAATAAAGAGAAAAATCGGCTGGATGGCATA  
AAAAATATTTTAGGCGAGATTAAACATGATTTACCTCTTCTGAACATCCATCTTAATGGAAGTGTAG  
AAAGTTAGATTGCGGCTGCTGGCTTGGCAAAAGCAAGGCCACCCCTCTCTATTTTTTCAATGAGATTTTC  
CAATCCTAGTCAAAATGGTGGTGTAGTTCTTTATTTTTGAGTTACTGCATTTCTCAATTTCTATGGTCATA  
ACAGCCTTCTGCTACCGACTCAGAACGGATTTTACCAAAATGAAATGCAGGCTCCATGCTCAGAAAGC  
TCTTTAACAGGCTCGAAAGGTCCATGCTCCTTTCTCTGCCCATTCTATAGCATAAAGAACAGCTCTCTG  
AGTGATAATCTCTCTCAAGTAGGTAATCTCTTCTCAATTTATTTTTCTCTTTTGTATATAATG  
TGCTACTGTTTACAAGCATATTGTAACCTCAGAGCTTACCTCTCATCTTTAAAAAATGTTTATTTTTTG  
TCTTTCTGCTCCAAGGATAATTTGCAAAAGTACTGGCAAGTATTTCTGGGATGATAAATGTGAAATCTA  
AACTGGGTACAGTGAAGTTCACTTCTAGAATAATATTTAGCTGAGGCAGAGGGCAATCCGACTACCCCTT  
TTCTTAGTACAGCACACAGGCTGCTGTCTGTTCCAGATAACATAAATGTATGGATCTAGCACTAGC  
TAGGAGACACTGATTGTTGAAGTGTGTTAGAATTTTAAAGCTCTTAATTTGGACAAATCTCAGAGTAGC  
ATGAACACACTACCTGTTTTCTGAATCTTTGGAGCCATAACTTACGTGAGTTTGAACCTAAGCGATGTGAA  
TAAGCCATTATTTGTTTCTTAAAGGCAGTCAAGTTTCTGAAAAGCTACACATTTAGCAGCAAAAGAACG  
AGCCCCCTCTGTCTTGAATGGGCTCTGATTTTAAAGCAAGCTCTTTTGTAGTCTGGTGTCCCATTCTCTC  
AGTTCCTTTTTGCTCACAATGGCAGATACATAATGACTCCACCACATATAGCAGTGGGCTACTCGGGTA  
ATGATGTGGCAGTCAAGACAGAGGCAGAAATCTTCAATTTTGGTTAGAGGAATGCCACATGTCTTAGGA  
AATGCTCGCTGAACGTGAAGTTTCACTTTTGTCAAGAGATAACCAAGTATTCTCTCAAACAAGTCCGTA  
GGAGCCAACATGATTTAAAGATTTTAAAGCAATTTACTCGATAGAAGGTTGGGCTTAATCAGGACTGTG  
GATCATGGCAATGGTTCTGCTTAAAGGTGCCAGATTTTTTAATGCTTTTTGTGCCAGATCTAATAGGC  
TTACAGCAACTCCATGATATGATAGGTTGTGCGGAACTCATCTGTTTTGAATGTGGTATATACATAT  
TTAATATTGAGAGTAACTTAGGAAGACCAGGTAGAAGTATTGAACCTGAATTTCTGAAACGTACAGAGA  
ACTTAATTTGGATGAGAATGTTTGAAGCAATTTACTCGATAGAAGGTTGGGCTTAATCAGGACTGTG  
TCCTATTTCTCAAAGCAAAATGTTTTCTTTGATTTTGTAAATATCCTGTGATGACTGCCCACTAGGCTT  
GGAATGCATGAGATAATGCTGTAGCAGTTGGATAAAATCTCTAGAATGTGAGATTTTCAAGGAAATTA  
CAAATAAAAAAATGTAGGTAAAGATACGACATGTAGGAAAAAAGCAAAATTTTCTTAAAGATAAAG  
CGTCGATTTTACGAGTAGAAGATTTTCTTGGACATTTGGAGATACTTGTTCATTTTATTGCTTGTGAC  
AGTCAAGGAAAGGAATAAGCTCTTGTGCTTAACTTGCAGCAAGAACAAAGTCCAACATCTTTCTGTT  
TCTGATAACTCTGTGCTTTTTGTTCAATATTGGGTTTAGAGCTAGCTACCATCTACCTTCCCTTCAAA

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ACTCACTCTAAACCTCCACACAGTGTAAAGTATTTACATCAGGCATCTGCTAAACATTTTCACATGGTTAT  
CTGCAGGCTCTCTCTGAGTCTCTCTGATTTCATTTATCCTAGTTGCTCAGAACAAATCGCTTGGGCTGACG  
GCCTGGTGGTTGAGTTTACTTTGCTTTGAATAGGGAACAGCTGTGCTCCAGGACTGCAGATTGGCTATTTC  
GGAAAAAGGGCAAGGAGAGAGTGAACCCAGCTCTGGGTAGACCATCCACACTGTAAAAAAGATCAT  
AGCATAGTCTTCATCTATGGCAGTGGAGATATGGTCTGTCCATCCACCTCTATCAGGAGAGGGTCTCCA  
TTGTTAATCTCTGAGAAAGAGGCTCCATCTGTGAAACCTCTGCAATTTGTCTAATGAAGTGTATTTTG  
AAAGGCGTGCACTGTACAGGTAAGAGTGATGATGGTGTGCCTGCCTTCTGGGCAACATCTCAGTAGACTT  
CCTCTGAATCATTTCCCACTGGACCCAAACAGCAAAAGCGTACACATCATTGAGTTTTATCGTTCTATCTAA  
GGCGTATAACATTTTCTCTCTGAAAGTCTGTGATTCTTTTCGGAGAATGAAGGGGCTTACCCTATCCATC  
TGCCCCATAAAATATTCTGCTGGAAGCTGATACCTCTGCTCAGGTTTTCCACAGCAGATCACTCTTCAGT  
AAGAATTCTGATATTAAGTAGTTTAATTTCAGATCCATGGAATAATGACTGAGTACCAGCCATAGCTCCAC  
CACTCTCTAGCTGTGCAATTTAGAGGCAGATTATTTAACCTCATGCCTTGAATTTCTCATCTGCAAGTG  
GGAGTACTAACAGTAGTACCAGATATATTATATGGAATAAATGACATTAGCCACTCATTAACTCCCTT  
GCAGTTTCCAAGCATTAGAACTCAGTATGAGGAAGTTATTTCTATTCTAAGCCTAGCACAGTGCCTGGT  
ACTCAATACATGTTGGTTGAATCAGTGAAATAATTCAAGGTCAGCACCAAGCTGCTAGGAATTTATGAA  
CATCTGATCATAACTGGAAGTGTATCTAAAAAGCAAAGGCGAGTCAATCCAATCAACTGAGCGTACCAT  
CTGTTGAAATGCTGCTGCTTCTGTAATGAGTATAAAGTGTGGAAGAGAAAGTCCAGGAACCTCCATCAT  
TCTTCCCTCCATCATTCTCTCTCTTTGTGACTATCTTTGTGATGAGAAGGGTAACAAAAAATCTTGCTG  
AGATGAGCGTGTCAAAACGCTGTTACAAATGCTTCACATTCCCTTTCACATCAACAGAACATGTTGCTT  
CATTGTTGGGCAATGTCTTAGTCCATACACATAGAGCTCTATGCTGATTTTTTTTTGAGATGGAGTCT  
CGCTCTTTCACCGAGGCTGGACTGCAGTGGTGTCTTCTCAGCTCACTGCAACCTCCGCTCCAGGTTCA  
AGCAATTCTCTGCTCAGCTCCAGAGTGTGCTGGGATTACAGGCATGTGCCACCATGGCCAGCTAATTT  
TCATATTTTTAGTAGAGACGGGTTTTTACCATTGTTGGCCAGGCTGGTCTCAAACTCCTGACCTTAAGTGA  
TCCACTCGCCTTGGCCTCCCAACTGCTGGGATTACAGACGTGAGCCAGCATACCCGCTTGTATGCTGAT  
GTTCTAATTCATGTGATACAAAGACCTGAGATAGTCTCTCCCACTCTGGCCCCATAACATATGTCCAC  
GAGGTGGTAATAATAACAATATAGTAGCACCTAAGGTTGGGGCAGCTCTTACTTTGTGCGATGCTTTTT  
ATAGTGTATTACGTGTGATTCTCAGCAACCCAGGTGGTGAACAACGTATGATTCTCTGTGTACAA  
ATGAGGAACTAAGGCTTTGCAAAGCTAGGTAACATGCCAATATTACACAGCTTCAAAAGTGACAGCCC  
TAGGACTTGAAGATAAACTCATCTAATCCAAAGCTCATGCTTTTAGCCATTACTTGAGACAGTATTAACT  
TTTTAAAGTTTGTAAATCAATATGAATTTGGCCTTGGGAAAGCAGGTTAAGCATCTGGGGTTGATGGGAGA  
TAACATTAGCCCTCTTTAGCCTCAGCAACTTCATCTGTAAATGGGAATAAATACATCCGAGTCACAG  
AAGTTTTGTGGCTCTTCATGAGGATTAATAAAGTAATGCATGTAAAGAGTTTTGTACAAAGTTCACCTT  
TTATAAATGAAGTTGTGGCCGGGATTGGTGGTTCACGCCTATAATCCAGCACTTTGGGGGGCTGAGG  
TGGGTGGATCACCTGAGGTCAAGAGTTCGTGACCAGCCTGGCCAAACAGGTGAAACCCGCTCTCCACTAAA  
AATACAAAAATTAGCCAGGAGTGGTGGCATGGGCTGTAATCTCAGCTACTTGGGAGGCTGAGACTGGAG  
AATCGCTTGAACCCGCAAGTGGAGGTTGCAGTGAGCCGAGATTGTGCCATTGAACTCCACCTGGGCAA  
CAGAGTGAACTGCACTCTAAAAAAGACAAAAAAGTAAGTTGTTATGCAATGCATAAAT  
ATTACTTAGTTCCATGTAAATCTTCCCACTAAGTGAATGAGGTTTACCTGGCTGTAGTGCTATGAGAT  
AGATATGAGGGCAGATTGGTCTTCTCTCAAAACAGAAAGTGTGCCAGGTTGGAAGTGTGGGTGGG  
GAGTCTCCGCTCCAGCCATGTGGCAAAGCTGGAATGTGAGTACAGCAGCAGTATGGATGCGGTTTTGA  
GGGGATGGTGGTAATCCTCTTCTGGCGGCAACCCCTCCAGTATTGTGGGATGCTCTCTGATTTCTTTGAG  
AAGCAAGTAGCTAGGAGCTTCCCTAGCCTTTCTGTTGTAACCATCAAGATCCCTGTTGAATGCATA  
CCTGGAGCTTGGTTTCCCTAAGCACAGACTTTAATAACTTCATTTGGTTTTAGTCTCCTATTAAAGCTG  
CCACCCACTCTCAATTTTTTGGGTTTTCTACTAAGAATGGATATAACATGGGCAGTCTTCCAGTTCTCC  
TTTCTTGCTGCTTGAAGACAACACACAGGCCAATCACAGGAGGCGAGAGACAGGCCCAACAGTTGAC  
AATCCTAGAGAGCTTAGTGAGTAGACTTGCTGAGGTTCTGACTTTTGCTGGAATAGGAGAGTGGCCAC  
TGGCTTTTTGACATTTCTTTTCCAACTGTTTCTTGTCAAAATGACCAGCTCAGCTCCCTAAACA  
TACCTCTCCCTAGATTGGTTTCAGAGGAAGCCATCAAGGTCCTTTTGCAAACGGATGATCTGCATTTTT  
GAGATCCTTCTTCTCTGCTGTTTCATAGAAATGGTCTCATTGGAATAATTCCTTTTGAATGTTACTAA  
GGACACCAAGAAATCAACAAGAAATTTGAGTGTATCTGACAGAAGAAATTTGGCTTTTGTACTCTAATA  
ATTATTTATTAGAGCAATAAATCTGGTCAAGATTTATTTGCTTAAACCATGTAAGAAAGGTGCTTAATA  
AAGATAATTGCATCACAATATAGTAATCCGTTTTAGTATCTTTCACCTTAAACTATGTGACAAATAAGA  
CACAAATTGCTCTTTCTTCTAATAAGCAATTTTGGAAATTCCTTATTGGGAAATTCCAAATTTTACAAA  
ATTTACAAAATTTAAATTTTGGAAATCGTACCTGCATCAAGTTTTCTGAAAGAAATTTAAGGATTAAG  
GTTACTTAGAATCCAAATATATGATAGTTTAAATTAACATCATTTGTTAAATCTTTTCTAATTTTATT  
TAAGAAATGAGTAATATTGACAAGGGCCTTGCTGTGGTTTATTATGGCTTGCTTAGAGTCTCTATTCCC  
AGCTAGATTAAAGTGCCTCAGGCTGGGCATGGTGGCTCATGCTGTAAATCCCAATATTTTGGGAGGCT  
GAGGCCAGTGAATCAGTTGAGGCCAGGAGTTGAGACCAGCCTGGCCAACATAGTGAATGCTATCTCTA  
CTAAAAATACAAAAATTAGCCGACATGGTGGTGCATGCTGTAATACAGCTACTTGGGAGGCTGAGG  
CAGGAGATTGCTTGAACCTGGGAGGCGGAGGTTGCAGTGAGCTGAGATAACACCCTGCCTCCAGCCT  
GGGAGACATAGAGAGACTCCATCTCAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATA  
AATAAGTAGTGCCTCGGGTGCATAGATGGGTTGTTACAGGTTTCTACCCTGTGCCTTGGGAAGTGCCTGG  
TACACATGGTGTGTTGGCACAATAATGTAGAGTGAGATTGAGCCTGGCATGTTCTTATCCCTAGACAA  
TCTCTATCAGGTGTGATCAGTAAGGCACATAATATGATATGTGACTATTACAGAGTAGCACACTACAATA  
TGTGCTTAAGCCATAACATCAACTAATACAATTCAGCAGAGTAGAATGTGAAGAGTGCTTGACAGAGTGC  
TGAGCACCACGGTGAGGAAGTGTAAAGAGAAGAGTATTTCTGGGTTGGTGCAGGATGGTTAGGGATAG  
CTTTGGGTAGGAAGCGACTCTTGACCATGACCTTAAAGGACAGGTAATGTTTACATGGGAAATACAAG  
AAAAGGAGGTGCATAATGAAAGGCATGGGGAGGTGGTTTTGGGAAACCATCAGTCTGACAGAAACATAG  
TTAAGAAAGTGCAGGTTGGTGGTAGGAGGTAAATTTAGAAGTGGAGAGTCAAGTGTCTTATTAAGGAGCT  
TGAACCTTTATCTTGTAGGCATTAAGAGTGTGGTGTAGGATTGGAATGAAATAAGACTTAACCTTAGAA  
AAATACTGTGTGGATTGAAGTTTTTCAGATGAAGAGTGGGTACATCAATTCGGAGGTGAGGAAATAGTTC

FIGURE 1, sheet 12 of 94

AAGGGAGGTGTACACCATTAAAAAATCTTTTAGGACTTGTTCCTTTCGAATCATGATTGTTTATGGTT  
 GTAAAGATTTTCTTTTTCAGAAATGATTGGTGGAGAAAGAGTATTGAGAATCAAAAGATGGGACTGTGC  
 CACTGATGTGCCAGTGAAGCTGCAAGCTTGGTGCCCATCTTCTAACTGTAAAATGGGCATAACAA  
 CTACGACAGCCGTCAAAACATTATACCTAGTGATACAAATGAAGACTAAGTGATATAATTTTGAAGGCA  
 GTATGCCTTATATGTGTAATAATGCTGTTTACTTGAATATTTTATAGTAAATATTTTCTTTGGACAA  
 GATATAGATGCAAGAAATGATCATATTTCTGTGAGATTAGGATTCAGACCATTTGAATTTTATAT  
 TTATTAATAGGTACTTTATGTTGGGTACTGAATAAGTCTTTTATTTTAAACACCTCATTCCCTCACAA  
 AATGGATGGCATCTTTGGACTAGGGGAAATGTGTGGTCCCTGCAGCTGTAGTATTTTATGATTCTATAGC  
 TTTTGCCTTTAGCAAACCTCTCTTAGAATAGTGATTAAAGGCTGGGTGTGGTGGCTTACACCTGTAATC  
 CCAGCACCTTTGGGAGCTGAGGCAGGCAGATCACCTGAGGTGAGGCATTGAGACCAGCCTGGCCAAACAT  
 GGTGAACCCCTTCTTTACTAAAAATAAAAAATTAGCCCCGTGTGGCAGCATGCGCTGTAGTCCCAGCT  
 ACTAGGGAGGCTGAGGCAAGAGAAATCGCTTGAACCGGGAGGTGGAGGTGTCAGTGAGCCAATATTGTACC  
 ACTGCACTCCAGCCTGGGCAGAGAACATTTAATGCTGGTGGCTCACACCTGTAATCCTAGCACCTTTGGG  
 AGGCCGAGGTGGGTGAATTTGCTTGTCTGAGGAGTTGAGAGCAGTCTGGGCAACATGGCGAAACCCCAT  
 CTTCTATAAAAAATACAAAAATTAGCCAGGTGTGGTGGTGCACGCTGTAGTCCCAGCTACTTGAGAGGCT  
 GAGGTGAGAGGATGACTTAAGCCAGGAGATCCAGGCTGCAGTGAGCTGACATAGGCCCATGTCACACTG  
 CATTCCAGCCTGGGCAACAGAGCAAGATCTTGTCTTAAAAAAGGAGTGAAGTAAAGTAACTGACAG  
 TATAAAGACAAACCAACCTGAGGATCTGTGTGGGAATAAAGACAGACATGTTTTCATTGCACTGAT  
 TTAGGATTCTGTGTGAAGGAAACTGTGATCTCTCTGCAGTTGCCTAAAAATGCTTTACAGTTATGGG  
 AATGGAAAGGCTAAATTTCTGTGATTGTGGGTAGAGGGAAGGAGGACGAGTGTCTTTCTGATTTCCTCT  
 TTTTCTTCTCTTCCAGGGGAAATAAAGGCTAGAGCAACATTTAAAAAGAAAGGCAAGGAGCTACT  
 GGGGGTAGAGTCGGGAGGGAAGGCAACCCACTAAATATTTCACTTCAGTTACAGTAAATCTCAA  
 ATGATGATGCTACACTCTGAGAAATGCTTCCATGTTGGAATGCTTGGGCTTGAATTTTGAAGCAGCAAG  
 TACCAGGAGAGGGTGACATGATAACATTCAACAGGAAGAACTGCTCTTGTCCGTTTGAAGGCTCTATT  
 CCTCCGATCACTCAATCTTCAAAATCAAGCATATAGCTCCTTCATATGTCATTGTGAAGGGAAGAC  
 TCCTAGGAAATGTTTCTAGGAAAGGGAAGGAGCAAGGAGTCTCTGCTTACTACAGCATTCT  
 GTCTGTGATAAGCACTAAGTAAATGATGTAGTGAGTATTAATCACTTAGAACAGTTCAGTATTATCTCTATCT  
 GGGCTCTGCAGGCTCTTTCTTCACTTCTTCTCGACATTTGGATTCTGTCCATTTTACTCCTCCCTCTG  
 CACTTGGATAGAAGTGAATTTGTGTGCCAATTTCTGTCTGTTTGAAGCCATGGTAATGTTTAGTAG  
 GGGAAAGCTTTGTACTGCTACATAGAAGGAGGTTTGGGATTATTTAAGACTTTACTTTGTGTGATGGGA  
 TTCTAGAACTCTACTATTACTGGGTATCTAGACAAGTTGTAGATTACAAAAGTGTGGATAACATGGG  
 TTGCACTTGATTCTTTATCCAGCTCTTTGGTTCTAAATTTATTTGCCAATTTTATTTATCAAACTATTC  
 TCAGCGAGTAGTATTTCTGTGGACACAGGAAACATCTGTGAGCTTAAACCTTAGAGGCAGATAGCCA  
 GTTAGAACATTTGGCATATGAAGCTTAGATAGCAGAGAGAAAAATTAACCAAGGCAACCCCTCAAAATA  
 TTGAGAAGGCAACTAAGTAAATTTCTTATCACTGACAGACTGCAGTATTGAGTTCGTGTAAATGAAGAA  
 ATGTGCAATACATAATGAATCAATAAGGAGTGTATATTATGGCAAGTTTCAATGTTGGTGTCAATCTC  
 GACTGCCAGGATTTATGGTAGATTATATATGGAATCCTGAGTCTGAGAGATCAAAGGAAATGCTGGC  
 TCTTTCTTCATCCATTCTCTTAGGTCAAGCCTATGCAGCAAGAACCAAGTTGAGAATTGAGCAATTATC  
 TGAAGTGGGACGTCAGGACGGCCAAACAGATATATATAACCAAGAGTCAACCGTGGAGGGAATGTG  
 GACTGAAATAGGATAAGGGGTGGAGGTAGAATGTCAAGCCATTTGGTCAGTGTCCACAGTCCAAATTTA  
 CTGAATAACAGCAATTTCTTACTTCTATGTGGTTATTTAGAGCGAGACTAGAGGACAAGTGAAAAA  
 AAAAGAGTTTCACTTCAAGGTTGTGTCATGTTTGTGCAAAATTTCTTCAATCTCTGTTATTATCTGTT  
 ACATGCTTAATTTCTGAGTACTTCCAGAGATTGCAATTTCACTTTTATAGTATTAGTGGGTTGAAGTGGTGA  
 GGAAGCCCATATAATCTGACTTACATGGAGAAACAAGTCTTTTTTATAGTTTAGTTGAGTGTATATT  
 TAATTAGCCTTTTTTCCCTCCATATGATGCTTATGAATTTCCACTTAAATTTCTGAGGCTCTGACC  
 TTTATCACTTTCTCATGAGCAATTTCTGTACCTCCTTAACTTTAGTAGAACATAGCAATGAATATACA  
 AGTCCCTAGATAGAAATTTGTGTAATTTGGTTTCTTAAACACAACTACCAAGTCTGAGGACCACT  
 GTGGTATTTTTTCTTCTATTGATATGGAACCATAACTACTTACTTTGAGCAGATGTTTCCCAGTCC  
 TAAATACAGCTATCAGTCCACTGGCCCTATAAATCTGTTGGAGTGCACCTGCTAATTTCTGAAGCCTCC  
 CTAATACAATGTTAACTTTCTTTTTTTTTTTTTTTTGGAGAAAAATGTAATTAGGTTCACTG  
 TTGCTTGGAAATTAGGAAAAATAAAAAACAGGCATATAATTTTCAAGTGGAAAAACAAAGTTAAGAA  
 TTCAACAAGTTTTTTTCCCACTCTATCATGTCTGCACATTTAAAGCTGTTATACAACATTTTAAAAA  
 CAACCAAAAAAACCCAGGCTTTTCCAAACAGCTTAGGCTGATGCCCACAGTAAAAAGTGCCCAT  
 GGGATATTCTTAAAGCACCCCAAGGAGTCTATTGAAATACTTAAAGTAAAAATTCAGAAGATTTTAC  
 ATGTAATTAATAATTAAGACGTTGTTTATAAGCAATAGGGAAGTGTATTAAAGTTGCATTGCTCAA  
 TTTCTCACTTGTCTGTGAGTGTGCTTTTTCAACCATGTAACAAGCTGTAATCTTGTGGTAAAT  
 CATACCTATCACAGCCACAGCAGGTTTTGTTCTGCTGTCACATGTGATTGAGATACGTGGGCTGGG  
 AGTTTTTTTTTTTTTAAATTTCTAATGGCAAAATGGATCTATAGAAATGGAAGTCACTGTAATCTCAGC  
 ACTTTGAGAGGCTGAGGTGGTGGATCACCGGAGGTGAGGAATGGAGACCAGCCAGCCAACATGGTGA  
 AACCCATCTCTACTAAAAAGATAAAAAATTAGCTGGCGGGCTGGTGGTGTGCGCTGTAGTCCAGCTA  
 CTTGGGAGGCTGAGGCAGAAGAAATGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCCGAGACCGCAC  
 GTTGCACCTCAATCTGGGTGGCAAGAGCGACACTACATCTCAAAAAAAGAAAGAAAGAAAGAA  
 TGGAGTCACTCCGTTGGGCTGAGTTGGTGTAGTGGATTATGGCCTGTGCGTGAATGAAGAAATCTTGC  
 CAATGGCATCAGTGGTAACCTAGCTTAAGCCCTACTCAGCTTTGTAAATAATGTAATCAAGGAATTTGAT  
 CTGAACAGGTAAGCCAAACATTGATTCTTCACTGCTTATTGATAAGTGAAGTACTTTTCTTTTAAACAG  
 CCTTTTCACTTAAGTGGGAGTCAAACTAGCTTTAATTAAGGAAATCTGTAGAAATCAACCATCTCTC  
 CCTTTCTTCTCTGTTAAAAAACAAGGAAGAAAGAACTAGGAAGGAGTAAGCACAAAGATCTCTTC  
 ACATTTCTCCGGGACTGCGGTACCAATATCAGCACAGCACTTCTGAAAAAGGATGTAGATTTTAACTG  
 AACTTTGAACCATCACTGAGGTATGTGTGAACATACTAGTTTCTCTCTCTCTGACTTTGTCCGT  
 AATTTGATAAGATCTTAATTTGGTCACTAGTTTGGAGAACGATTTTTCATTAAATTTCTTCAATTATCAAG  
 TGTGATTGTGAGGGCTTAGCAGTACACCTACTATCTGATGGGCACTCTACATGCGTTGCTTAGGTTGA

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AATTAAGGATACAATCTGTGCACTACCACCATTTAAAAAATCCCCAAGTCTACTGTGTGGGTGAGGTTT  
 CTTTGCATAGTATCAGAGAGGTTAACCAATTTATTTACATACTCAATAGTCCACTCTAAGTAGGGAAAAAT  
 CCAAGCTTTTTTTTCTTAAGAAAGAGCTTTTCATTCTTTTTTCCCTCAGAGCTTTACCATAGTTCCAG  
 CAAGTGAAAACATTTCTTGATTGAAATTTACAACTCTCTCTCTCTGCCAGTTGTATGGTGCTAATA  
 GGAAGCAAAATGTGAGTGTGCTTTAATTTAACCTTAAATAGGGGAATATCTTCAGAATTTAGACTTTA  
 CATATTCAGTGACCTACCTAAAAATAGAGACATAGTTCTAACCTTCTCAATCATTAAGAAACATTTCTAT  
 TGAATTTAATTATTTCAAAACAACAGGTAGCAGTTTCAAGGGAAAAGACAAGCCATGCCACTTTGATTT  
 GTGGTCACCAAGTAATTTACATTTATTTTTATTTAAAAATTAAGATAAAATAACTTACTGACTGTCAAGTCC  
 ATTTCTCATTCTCTCCATAGAACATTTTAAACTAGTTTCAAACTCTTGAAAAGTCATGCCTCTAGAA  
 AGTGCAATTTGTCAACATTGGCTAGAGCCAACTTGAGAGGCTGTGTATCTATGCAGCATTTTGCAAAATC  
 CAGTAGCAGGCATGTGATATAAAAGATTAAATGCACCCCTGATTTGTGAATACTATCCTAGCCTTCAAAA  
 TGTTCAAAAGCACAGGAAGTCTGCACCTTTTAAAAATATAACCTGCCCAAATGCAAGGGAGGGGTGGGT  
 GTAGGACCTAGGTCTGTCTGCCAATCAGCTTGAGATGCCAGTGACGAAACCTGACTTCACTAAAAACCA  
 GACTGGCAAAATATTACTCAGCGTGGTAATTTCTTAATTTAGAACTGGCCTGTTTGGTGAAGTATTTTCA  
 GAAAATTTTACTGGACCTTTCTACCTACTGCATAAGAAATGAAGGTTTCTAGGCAAGACTTTACT  
 TAGTGACTAACCAAAATGGTAAATAAAGTCAACCGCTTCCAGGCTAGCTACTGCTCTCAAAACAGTGC  
 AGGACTGGTCAGGCCAGTCTTCTGAGGCTGGAGGTGCATGTGGAACCCCCAGAGCCTTGTCTGCAAGGGC  
 ATGGCTGACTGCAGGCTGTTTAGAAGCACCCGCCCTGAAACTCCTCTGGCTTAGGAATTTTAAACAG  
 TTCTAGTTCTAATCTCTCTGTCTCAGAGTCTGAGCAGCTGTGAATGAGCTCTCTGTGAATCACAGAAATG  
 TTAATGGGTGAGTGTCTAGCTTCTTACTTCCAGTGGAAGGCGCTGTAGCTCTTTGCCAGCTTGATG  
 CAGTGAGTTTGATTCCTCTTTTGGGCAGCAGGGAGAGATAATGAAGGAGGGGAAAAAGATTTTAATAT  
 AGAAACGAGTCTTCCATCTGGCTGAGGCTGAACAAAGTAGAAGAACAGTGCAAGTCACTGGGGTATGG  
 ATCTCATACCATTTTACGATATACCTCTCTCTCTCTTTTGTATCTACACATGTCAGTCCCTGAGTA  
 GTCTTGCAATTGCTTTCCCACTTTGAAGTCTTAGATCCAAACTCTGATTCCAGAAAGGTCTAAGGTGCT  
 GTTCTGAGATTTTGAAGAGACCTGAGACAACTGTTGGGATTCTAGACGCTATTGCGCATCTGCCTGG  
 GTAACCTGTGTCACTTAGGTTGGGTCAACAGATAATTTCTCTCCATTTTGTCTGCTTTTCAATTTATAA  
 ACAACACAGAACATCAGTGGTCTCTCCCAATCAATATATTGGCTCTATTAATATTAAATTTGATCT  
 TGAGTAGAAAGATTCTAAGGGCTAAAAAATAAAGATGTAATGATGTTGATAGGTTAGTGTAGAACG  
 CACCCATGGGGTGGCCCCACTCCCACTCTTTCATATTTTTTTAAGAAACAACACTCAAGTTACAAAGT  
 CGATTTCTTTTTTGTGTTTATTTAGAGTCTGAGTCTCACTCTGTCAACCCAGGCTGGAGTGCAGT  
 GGTGCACTCTGGCTCACTGCAACCTCTGCTCTCCCGGTTCAAGCGATTTTCTGCTCAGCCTCCCAA  
 GTAGCTGGGATTACAGGTGCCGCCACCACACCCAGCTAATTTTTGTATTTTGTAGTAGATAGAGACAG  
 GGTTTCACTATGTTTACCATTGTTGACAGGCTGGTCTGAACCTCTGACCTCAGGTGATCCACCCGCT  
 CAGCCTCCCAAAGTGTGGGATTACAGGCGTGAGCCAACGCCCTGGCCACAAAAGTCAATTTCTTAACCT  
 AAAACATAAAAGTTTCATTTCTTTTATGGTCTACTAGTCTGCTGGAGTCACTGAGTCACTCAAGTA  
 GTTTGCAGAAATGACAGTTGTGATACCTATTCAATTTACCCACCAGATTATTTCTGCTCTCCCATGGCACT  
 TTATAGAAAACAGTTTATTCGCTCATTACAAAGCTCTAGGAGGGGGTTTCATTAAACCCACTTTCTAGG  
 AAAGCGAAGTAAAGGCTTAGAAAAATCAAGTAATTTGCTAAAGACTACCCAGCTGGCAATGATATGACAG  
 ACATGAACATAGGACATAACTCAAGGCTTTGGTCCCTGTAATATGGGTTTCCAGGTTATGTATGCAGG  
 CAGAGGGCTTAGATCTGAAGTTTCTTTCAGAACTTCAGGATCTAAGCCCTCTATATAGGAGCAGTATA  
 AAAAGGAAGGATCTCTTCCCATAGGAGCTTGTGATCCATTGAATAGGAACTCAGACTTCCACTGTGAA  
 ATGATATTTGTATCCCATTTGTGTGCGAGATATGGGACTCTGATCATCATAAAGAGCACATTTTCTCTGC  
 CATATAAGACTATTAATAGAGTCAAGATTATATATATCTGGAACACTTTTACCTAGCAGAAAGACATA  
 CAGGCTAGGATTAGCTGACTAATAATTTTATTTATCAAGCTCAATTTCCATGCTGACTTCTCTCTCTA  
 GTGAAAATGTGTCATCAGATTGGTCCCAACTGGAGAGGTGAAAGGATCCCTTGACCAGTATAATAGCC  
 ATGCCATCAGTTTGTCTTCTCAATTAAGTTTATATGGGTTAATGATCTATATCATTATTTTGGGGTT  
 TCTAAACACATATGAACTAAAGATGGAAGATGATGGAAGAGATGGAAGAGATGACTCAGATGTACA  
 AAGGCTTGCAAGAGAGAAGGATAAGCCAAAAATTTGGTAAATCACACATGAATAATCAAGAACTGACTACA  
 ATATAAATAATGTGTCCATTCCCACTAATGAATAAGCTGCCATTATGTCTCTTCTATTCTATTAGGA  
 CAAATTACTTCTCTGCTGATTTTCCATTCTTACAGGTACCTATCTGCTGTGATTTTCCAGTTTGTGACT  
 TTATCTTGTGTTTAAATCTTGTCTCTAAGTAAGCTGCAACCCAGTAAATATATTCCAGTATTGTTTAT  
 STAATCTCTGCTTTATGTGAGGTGGCAAGAGGAAGGGACTGGTTTATTAATTTATCAGTCTGGGTGTG  
 TGCTAAGAGGATCCTTAGTACATGCTTTGATTATGGTAGATTGAGTCTAAAAGATTGAGCTGGTTTATTC  
 CATTTATTTTGGTCTGTCTACCTAACAAAGTCCACAGTGGATTATACTAGTTTCTATGTGTCTATTTG  
 TTGGCCTGACACATAATAGCAATAAGAGGTACCAGAAATTTTCTGTACAGTCTGAAGCTGTGTGTGTACA  
 ACAACCAAGTAAAAATCTTAGTTATTTGGACTTTTGGGTTCATGATGCCAGAGAAAGCCAGACACCAGC  
 AGCTGGAATCAGCTAAGACCTAAGACCTGCATGCACATATAGATGTTTACATTTTCTTCTATTGCGAC  
 ATTCAGCCATTGCTTTTGGGCCCTATTTCAATAATATATTGCTGCTCATCAAGTGGAATAATGTTTTGT  
 TACTAGCTGAGTATTGAAAAGCTCTTCAATAGTTTGTGATTTTGAAGTCAAGTCCCAACATGCAGGACCCAT  
 TTCTTCACTGACTTTTGGCAACAGGAGAGATTGACTAGTGGGCTTGAAGTGTATCCACTGCTGTCTGTG  
 TTAATTTCTTCAATCTTACTGGGTCTTGGGAAGAAGAGGTAGCGGCATCTTGTGCTCAACCAAGG  
 AAGCACAAAGCCATCCAGGCGGGGCAGGAGAGGTGGGAGGGAAGAAGCAGGCTCCACAGGGCCATT  
 GTTTACCTTGTGGCGGCTCAGGTCTTCTCAGGGTAGGGTTCTTGGGATAAGAGCAAGGCTTATTGGTTT  
 TCCTTGCTGTGCGACGAGAGCACACCAGATCACCCCTGCAGCCTTGTCTGCTTCCACAGCCTGCCCTT  
 GCCTAGGGTTTCACTGATATCCTTTCTACTCAGGAGGAGAAACCACAGAACATGGAGGAAGTGTTC  
 CAGTGTAAAGATTAGACCAACTATAGAAATCTGTTCTACCTGGAACCTGAAGAAATAAATCATGAC  
 TGCTACTCAGTGAAGTAAAAATAAAAAACAGCTTTACTGGTTTGAATCATAGGAAGGCTTTCTGTATA  
 GCCTCTCTGAGAGCTGCTTACTGGAAGGATTTGTCTCTAAAACGTGAGGATTTGTGGTGTTCAGGGTTT  
 ATATGACACTGGCAGGATAGTTTGTAGAGGGCTGTGCTTCGACCTTTATCCAAGGGATGTAAGCCGTGT  
 GTTTAGGTTAGTGAGCGTCTAGCACAAAGCTCTAATGTTGAAGGAGCATGGAGGCAGCTGTGCCCTCG  
 AACATGTAGAATTGACTAGAAATGCCAATGTTCAATTTCAAATGAATCATATCTTTCTATGCTTCCA

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TTTAAAAATGATTATTACATTTTGCATATGGTTGAATGCATATTAATTTTAGCAAGTTTAGAAAAGAGA  
TAAGCATAAAGACATACATAAAAAATCACTTATTCTCATCAGCTATAGATAAATCACTAACAAATTTTAGG  
ACATTTTCTTTTCATCTTTTCTTAGCAATATGTATGTGTGGGTATACATATTTAAGTGTGTATATAT  
GTAAATTAATAAACATAAAATATTTCCACAATATAATTAATAAAAAATCTAAGATACAACACAATTTCCGT  
TTGTAATATGTAGTGTATATATGTATATATACACATTATATGTATATATAAAATACATGCATAAAATAGA  
TACACAGGTATATATTTTGCAAATGAAATGATGTTGTATCTGTAGATTTTATTTAACATTAGAATTTA  
TTTACACTACTTAGGTGTTTTAACAGGATTGTGGTCCACCATTATTTCTTAAGAGTAATTCACAAAA  
GTGGAATAGAATGTCAAGGGGCAAAGTCTTTATAAAGTCCTTAAGGAGTATTGCCAGATATATTTTTT  
TTTACTTCTCTTTTAAAAATGATTGTATTGTAGAAGTCTCTTTTAAAAATCCAAGCAAAATTTTCAA  
AATCCCATCTAGAAATCAAAATCATGATTTTATTTGGCTATGCCTCTGTAGTCTTGTCTATGAACCTTAT  
TCTATTATTAATAATAATAGGTAATTTCCACTAATTTGACAGATAGAATTTTATTTTACATTTTCTCT  
TGTATACAGTGCCATGCATATTTCTATTATGTTACAGAGATCTTGGGGTCTTTTTCTCCCTTTTCTCT  
TTCTCTTTTCTTGTCTGTACCCCTTCACAGAAACCAACAAATACAGGTTGATGTGTATCTCTACTCTT  
TTCTCCATGCTCACACAACCAATATTTACACATGCATGATTTTTCAGGGCAATGGTCTTCTTTATCA  
TAAATTGTGGGATAAGGTTATATACATAATATATGTGTGTGTGATTACTCTGAATCTTGGTTTGTGCAC  
TTTGCAATATGTCTTAAAGATTCTGATAAATCTTATAGATCTATCTCATTCTTTTCAGTAGTTGCATGCA  
GTATAAATTTACTATACTTATTCAAGTAATCTGCTTTCAGCTGATACTCTGTTGTGAACAGTTTCAAC  
ATATAAAAAAGTGTCTGTCATTACAAATATTCTAGATATATATTCTTAGTAATTTGGGGTTTTATTTTAA  
TGGTGTAAAGTCCAGGAGTAGAATTGCTGGTTTAAAGGTATGTGATTTTTACATTTCTATTGTTTCT  
TCATATTATTTTCTAAAAATATTATAGCAATCACAGTCCCACTAGTGTGAGAGTATCATTTTCC  
TCACTAGTACTCTATTTTCCCTGCTTCTAATCTTTCTCTGATCTAATGAGTAAGCATTGTTAATTTTCTT  
TTTCAATTTTCTTGAATCTTAATGAGCTTAAGCATCTTTTCACATTATTGTTGTTCTTTGGATTCTTAT  
CTGTCAATTAACATGGATATCTTGTACCTTTTCTCCCTTATATGGTTGCTTTTCTCTTATTAAAAAT  
TGTAAAGTTTCTTGTACTATTACAGATTTTAAAACTGGCAGATAAAGTTGTATGATTATTGTGTATAA  
TATGATATTTTGTAGATATACATATATCTTGTATATCAATATCGAGATATATATATCACACGTTGTGGAA  
TGGCTAAATATAGCTAATTAACATGTGCGTTACCTCATGAAGTTATCATTTTGTGGTGAGAACACTTAA  
AACCTCTCAGCATTTTCAAGAATATAATATATTGTTATTAACATATAGTACCAGTGTGTACAGTGGAT  
TCTTGCATTTACTTTTCCGATTTAACTGAAGTTTGCATCCTTTGACCAATGTCTTTCCAACCTCACCT  
CCCACCCCTCTGCCCCGACACTGCCCCAGCCCCGGTAACCACTTCTACTCTCTATGTCTATGAGATCAA  
CCTTTTGTAGCTCTACATATAAGTGAGATCTTTTGGTATTGTCTTCTGTGCTGGCTTATTTCACCTTA  
ATATAATGTGCTCCAGGTTTCTCCGTGTTTGTGCAATGACAATATTTTCTCTTTTAAAGCTGAAT  
GGTATTCCCATGTGAACATATACCATATTTTCTTTATCCATTCTCTGTTGATGGATAGTATTGATT  
CTACATCTTGGCTATTATGAATAATGTCTGTAATAAACATGGGAGTGCAGATATGGCTTGACATACTGAA  
TACATTGCTTGGGATATACCCAGTAGTGGGACTGCTGAGTCATTCCGTAATGTATGATTACTGTTT  
TCCATAGTGGCTGTACTAACATACCTTCCCACTAACAGTGTGCAAGGTTCTCTTTACTCCGCTATCTTG  
CCAACACTTTTAAATCTTTTGTCTTTTCTAATAACCACTTCTAACAGGTGTGAGATGATATCTTTGTG  
GTTTTAATTTCCATTTTCTGATGATTATAGTGTGCTGAGCATTTTCTATAGATTTTTTTTTTTTGGT  
CAGTGGATTGTAAATCTTACCCCGTCAATAATTTCTCCTTTGATTTTACTTTTATAATTTTCTGTACA  
AAATTAATAAATAATTTGTATGAAATAAATTTTCTTCTATACGTATCTGAATTTCTATCTTACTTCA  
AAAGAGTCTTCCACCTCTATTTTCTAATAATTTCTTCTAATAATTTCTATGTTTTATTATTATTTT  
TAATATTTAGTATTTTTTACATCTGGAATTTTTTATATAAAGTGGAGGCTCAACTGCATCTCTTTT  
ATATAAAGAACGAATTTGTTTAAACATACATGTTAAATAATCTTTTCTCAATAAATTAATATATTTAG  
CATCAATTTAAAGATTTTTTCTTAAACCTAATCTATTTATTTGTTGCCAGGCTGAGACGTATTG  
CTTTGATTATAATAGCTGTATAGTCTCTTTTAAACATTTGGCAAGTTTGTATGCTCCCTACTCATTAAAT  
ATTTATAATGTTAGCTGTGTTTTCTTTTTTTTTTTCAGTCCAAATAGGATTAGTCAGAAGAAAGATAC  
GTGGATTACATTTTAAATACTGATCAAAATGAAGATGCTCAACCGTATAAATGGCAGATGAATAGA  
CTTTAAAGTAAAAATTTTCTTAAACCACTAATCTATTTATTTGTTGCCAGGCTGAGACGTATTG  
GCAACGTAGCTCCAAATATTAGCTTGAACATGAAATGGCAATAGTTGACCATTTTTGACCTACAAA  
AGCAACAATTTATATAAAGAAAAGGTCAATAAATATGGTAAATTTGAATTTTTTTTTTATTATTACACTT  
TAAGTTCTGTGATACATGTGCAAGCTGCAGGTTTGTACACAGGTATACACATGCCATGGTGGTTTGC  
TGCACCCATCAACCCGTCATCTACATTAAGTATTTCTCTATTTGCTATCCCTCCCTAGCCCCCACCCT  
CTGACAGGCCCCAGTGTGTGATGTTCCCTCCCTGTGCTTAGGTTCCCACTTATGAGTGTGGCGTTT  
GTTTGATGTTCTGTGTTAGTTTGTGAGAATGATGATTGCCAGCTTCATCCATGTCCCTACAAAGGACA  
TGAACCTCATCTTTTAAATGGCTGCATAGTATTCATGGTGTATATGTGCCACATTTTCTTAATCCAGTC  
TATCATTTGATGGCATTTGGGTTGGTTTCAAGTCTTTGCTATTGTGAATAAGTGTGCAATAACATACAT  
GTGCATGTGCTTTATAGTAGAATGACTTATAATCTTTGGGTATATACCCAGTAATGGGATTGTGGGT  
CAAACGGTATTTCTAGTTCTAGATCTTTGAGAAATGCCACACTGTCTCCACAATGGTTGAACATAATTT  
ACACTCCCACCAACAGTGAAGCATCTTATTTCTCCACATCTCCCAAGCATCTGTTGTTTCTCTGAC  
TTTTTTTTTTTTTTTGTAGATGGAGTCTCACTCTGTTGCCAGGCTGGAGTGCAGTGGTGAATCTTGGCT  
CACTGCAAGCTCCACCTCCCGGTTCTAGCCATTCTCTGCTTCAAGCTCCCAAGTAGCTGGGACTACAG  
CGCCCCGCCATCATGCCAGCTAATTTTTTGTATTTTGTAGTAGACGGGTTTCACTGTGTTAGCCAGG  
ATGTTCTCGATCTTCTGACCTCGTATCCACCTGCTTGGCTCCCAAGTGTAGGATTACAGGCGTGA  
GCCACCGCACCTGGCCTGTTTCCAGACTTTTAAATGATCACCATTCTAAGTGTGAGATGGTATCTCA  
TTGTGGTTTTGATTGCAATTTCTCTAATGACCAAGTGTATGAGCTTTTTTTCATATGTTTGTGGCCG  
ATAAATGACTTCTCTTGAAGTGTCTGTTCAATCTTCAACCACTTTTGTATGGGGTTGTTGTTTTT  
TTGTATATTTGTTTAAAGTCTTGTAGATATTAGCCCTTTGTGAGTGGAGAGATTACGAAATTTTCCCC  
CATTCTGTAGGTTGCTGTTTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG  
GATCCCATTCGTCAATTTTGCCTTTTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG  
GCCTGTGCTTAAATGGTATTGCGTTGGTTTTCTTCTAGGTTTTTATGTTTTCGGGTCTTACATTTAAG  
TTTTTAATCTTGAAGTTAATTTTGTATAAGGTGAAGGAAGGATCCAGTTTCAGTTTTCTGCATATGGC  
TCGCCAGTTTTCCCATCACCATTATTAATAGGAATCTTTCCCATTTGCTGTTTTTGTGAGGTTT

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CCAAAGATCAGATGGTGTAGATGTGTGGCGTTATTTCTGAGGCCTCTGTTCTGTTCCACTGGTTTATAT  
ATCTGTTTTGGTACCAGTACCATGCTGTTTTGGTTACCGTAGCCCTGTAGTATAGTTGAAGTTAGGTAG  
CATGATCCCTCCAGCTTTCTTTTAGCATAGGATTTCTTGCTATACGGGCTTTTTTTGGTTCCATATG  
AAATTTAAAGTAGTTTTTCTAATTCATGAAGAAAGTCAATGGTAGCCTGATGGGGATAGCATTGAATC  
TATTAATTACTTTTGGCAGTGTGGCCATTTTCATGATATTGATTCTTCCTATCCAAGAGCATCGAATGTT  
TTTTCCATTTCTTTGTGCTCTCTTTTTTCCCTGAGCAGTGGTTGTAGTTCTCCTTGAAGAGTCCCTTC  
ACTTCCCTTGTAAGTTGTCTTCTACATGTTTTATTCTCTTGTAGCAATTGTGAATGGAAGTGCACCTCA  
TGATTTGGCTCTCTGTTTGTATTACTGTATAGGAATTCTTGTGATTTTTGCACATTGATTTTGTATCCT  
GAGACTTTGCTGAAGTTGCTTTTCAGATTAAGGAGATTTTGGGTTGAGATGATGGGGTTTTCTAAATATA  
CAATCATGTCATCTGCAACAGAGACAATTTAACTTCCCTCTCTTCTATTTGAATACCTCAATTTCTTT  
CTTTTGCCTGATTGCCCTGGCCAGAATTTCCAATACTATGTTGAATAGGAGTGGTGAAAGAGGATATCCT  
TGCTGGTGCTGGTTTTCAAAGAGAATTTCTCCAGCTTTTGCCCATTCAGTATAGTATTAGCTGTGGGCT  
TGTCATGAATATCTCTTATTATTTTGAAGGTATGTTCCATCAATGCCACTTTGTTGAGAGTTTTTAGCAC  
GAAGGGGTGTTGAATTTATTGAAGGCCTTTTTTTCATCTATTGAGATAATCATGTGGTTTTTGTCAATTG  
GTTCTGTTTATGTGATGGATTACATTTACTGATTTTGTGATGTTGAACCAGCCTTCATCCAGGGATGA  
AGCTGACTTGATTGTGGTGGACAAGCTTTTTGATGTGCTGCTGGGTTTCAAGTTTGCAGTATTTTATCGAG  
GATTTTTGCATCAATGTTTCATCAGAGATATTGGCCTGAAATTTCTTTTTTGTGTGTCTCTGCCAAGT  
TTTGGTATCAGGATGATGCTGGCCTCATAAATGAGTTAGGGAGGAGTCCCTCTTTTTCTATTGTTTGA  
ATAATTTCAGAAGGAATGGTACCAGCTCCTCTTGTACCTCTGGTAGAATTCGGATGTGAATCCATCCTTG  
TCCTGGGCTTTTTTGGTTGGTAGGCTATTAATTCCTGCCCTCAATTTCAGAACTTGTTATTGGTCTGTTT  
AGGGATTTGACTTCTTCTGGTTTAGCTTGGGAGGGCGTATGTCTCCAGGAATTTATCCATTTCTTCTG  
GATTTTCTAGTTTATTGGCCAGAGGTGTTTATAGTATTCTCTGATGGTAGTTTGTATTCTGTCTCTGTAGC  
GCTGGTATATTTCCCTTTATCATATTTAGTGTGCTATTGATTTTTCTCTTTCTCTTTATAGTCT  
GGCTAGCAGTCTATCTATTTTGTAACTTTTTCAAAAACCAGCTCCTGTGTTTCTGATTTTTTTTTGA  
AGTTTTATTTGTGTCTCTGTCTCCTTCAGTTCTGTCTGATCTTAGTTATTCTGTCTCTGTAGCCTT  
TTGAATGTGTTTGTCTTGTCTCTCTAGTTCTTTAATTGTGATGTTAGGGTGTGAGTTTGTAGATCTTTC  
CTGCTTTCTCTTGTGGGCATTTAGTCTATAAATTTCCCTCTAAACACTGCTTTAGCTGTGTCCAGAGA  
TTCTGGTATGTTCTGTCTTTTGTCTCATTGGTTTCAAAGAACTTATTATTTCTGCTTAAATCTGTCTAT  
TTACACAGTAGTCATTTCAGGAGCAGGTTATTCATTTCCATGTAGTTGTGCAGTTTGTAGTGAGTTTCTT  
AATCCTGAGTTCTAATTTGATTGCAGTGTGGTCTGAGAGACTGTTAGGATTTCCATTCCTTTTGCATTTGC  
TGAGGAGTGTGTTTACTTTTAACTTATGTGGTCAATTTTGAATAAGTGTGATGTGGTGCTAAGAAGAATGT  
ATGTTCTCTTGGTTTGGGGTGGAGACTTCTATAGATGTCTATTAGGTCTGCTTGGTCCAGAGGTGAGTTC  
AAGTCCCTGAATATCCTTGTTAATTTCTGTCTCATTGATCTGTTTAAATATTGACAGTGGGGTGTAAAGT  
CTCCCGCTATTATGTGTGAGAATCTAAGTCTCTTGTAGGTCTCTAAGAAGTGTCTTATGAATCTGGG  
TGCTGCTGTATTTGGGTGCATATATATTTAGGATAGTTAGCTCTTCTCGTGCATTGATACCTTTACCAT  
ATGTAATGCCCTTCTTGTCTTTTTTGTCTTTTGTGGTTTAAAGTCTGTTTTATCAGAGACTAGGACTG  
CAACCCCTGCTTTTTTTTTGTCTCTCCATTTGCTTGGTAAATCTTCCGCCATTCCTTTATTTGAGCCTAT  
GTGATCTTCTGCATGTGATATGGGTCTCCTGAATACAGCACCAATGGGTCTTGACTCTTTATCCAGT  
TTGAGGAGTGTGTTTACTTTTAACTGAGGCAATTTAACTGTTTACATTTAAGATTAAATTTTTATGTGTGA  
ATTTGATCCTGTCTATTATGATGCTAGCTGGTTATTTTGCCCATTAGTTGATGCAGTTTCTCGTAGTGTG  
ATGGTCTTTACAATTTGGTATGTTTTTGCAGTGGTTGGTACCAGTTTTACCTTTCCATATTTAGTGTTTC  
TTTTAGGAGCTCTGTAAGGCAGGCTGGTGGTGAGAAATCTCTCAGCATTGCTTGTCTGTAAAGGAT  
CTTATTTCTTGTCTTCAATTTATGAAGCTTAGTTTGGCTGGATAGAAATCTAGGTTAAATTTCTTTCTT  
TAAGAATGTTGAATATTGGCCCCACTCTCTTCTGGCTTGCAAGGTTTCTGCAGAGTGATCCACTGTAG  
TCTGATGGGCTTCCCTTTGTGGGTAAACACAGCCTTCTCTGCTGCTGCACTTAAACATTTTTCTCTCATT  
TCAACCTTGGTGAATCTGACAATATGTGTCTTGGGGTGTCTTCTCTCAGAGATATCTTTGTGATGTTCT  
CTGTATTTCTGTAATTTGAATGTTGGCCTGTCTTGTAGTTTGGGAAGTTCTCTGGATAATATCCTGA  
AAAGTGTTTTCAACTTGGTTCCATTCTTCTGTCACTTTTCAAGTACATCATCAAATATAGGTTTGGTCT  
TTTCACATAGTCCCATATTTCTTGGAGGCTTGTTCATTCTTTTCACTCTTTCTTCTCTAATCTTGTCT  
TCATGCTTTATTTCAAGTTGATCTTCAATCTCTGATATCCTTTCTTTTGTGATTGATTTCAGCTATTGA  
TACTTGTGATGCTTCCATAAAGTTCTTGTCTGTGTTTCTCAGCTCCATCAGGTCATTATGTTCTGCTC  
TAACTGGTTATTGTAGTTAGCAATTCCTCTATCTTTTTTCAAGGTTCTTAGCTTCTTGCCTTGGGTT  
AGAACATGCTTCTTCAAGCTCAGAGGAGTTTGTATTACTACCTTCTGAAGCCGGCTTCTGTCAATTCAT  
CAAACATCTCTCCATCCAATTTTGTCTCCTTGTCTGGCAAGGAGTTGTGATCCTTTGGAGGAGAAGAGGT  
GTTTTGGTTTTTGGAAATTTGACGCTTTTGTACTGGTTTATTCTCATCTTTCATGGAATTTATCTACCTTT  
GGTCTTTGATGTTGGTGACCTTTGGATGGGGTTTCTGTGTGGATGTCCTTTTTTGTGATTAATGCTAT  
TCCTTTCTGTTTGTAGTTTTCTTCTAACAGTCAGGCCCTCTGCTGCAGGTCTGCTGGAGTTTGTCTGG  
AGGTCTACTCCAAACCTGTTTGTCTGGGTATGGAGGCTGCAAAACAGCAAAGATTGCTGCCCTGTTCTCT  
CCTCTGGAAGCTTTTGTCCAGAGGGGCACCCAGAGATGCCAGCCAGAGCTCTCTGTATGAGGTGTCTG  
TCAACCCCTGCTGGGAGGTGTCTCCAGTCAGGAGGCACAGGAGTCTGGGACCCACTTGAGCAGGTAGTC  
TGTCCCTTAGCAGAGCTCAAATATTGTGCTGGGGGATCCGTTTCTCTTTCAGAGCCAGCAGGAGGAAT  
GTTTAAATCTGCTGAAGCTGTGCTCACAGCCGCGCTTCCCCAGGTGCTCTGCTCCAGGGAGATGGGAG  
TTTTATCTAAGCCCTTGAAGTGGGACTGCTGCTTTTCTTCACTGATGCCCTTCCAGAGAGCAGGAAT  
CTAGAGAGACAGTCTGGCTACAGCAGCTTTGCTGAGCTGCGATGTGCTTACCCAGTTTGAACCTTCTGG  
TGGCTTTGTTTACACTGTGACAGGAAACTGCCACTCAAGCCTCAGTAATGGCGGATGCCCTCCCCC  
ACCAAGCTTGAGCATCCAGGTCAAGTTTCTGACTGCTGTGCTGGCAGCGAGAATTTCAAGCTCATGGATC  
TTAGCTTGTGGGCTCTGTGGGGTGGGATCCACTGAGCTAGAACATTGGCTCCCTGGCTTCCAGCCCCC  
TTTCTGGGGAGTGAATGTTTCTGTCTGCTGGCATTCCAGGAGCCACTAGGGTATGAAAAACAAAACTC  
CTGTAGCTAGTTCGGTGTCTGACCAAATGGCTGCCAGTTTTTGTCTTGAACCCAGGGCCCTGGAGGCAT  
AGGCACCCAAAGGAGTCTCCTGGTCTGCACCAAGGGAATCTCCTGGTCTGTGTGTTGCAAGACCATGG  
GAAAGTGTAGTATCTGGGCAGGAGTGCACCGTTCTTAGGGCACAGTCCCTCAGGGCTTCCCTTGGCTA

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GGGGAGGGAGTTCCTGACCCCTTGGGATTCCCAGGTGAGGCGATGCCCCACCCTGCTTTGGCTCACCCCT  
 CTGTGGGCTGCACCCCTGTCTAACCACTGCCAATGAGATGAGCTGGGTACCTCAGTTGGAAATGCAGAA  
 ATCACCTGTCTTCTGCGTTAATCTCACTGGGAGCTGCAGACTGGAGCTGTTCCTATTTGGCCATCTTGCC  
 CCTTGGTCTGGTTCCTAACCTTCAGTCTTCCATATTTATTTGAATGAATTTCTGCAGCTTTATTAAAA  
 AAGAATAGAAACAAGTAAGAGCAAAGCATAGTTGGTTTATGGTTGTAATAAACTTATATGTATGTCCTAA  
 TGATTTGACAGCTTTGTGATAGTATCTTGTAAATCCAGTACATGATATATTTCTACATTTATTAGATCTT  
 GTGTTAGGTTTTTCCATAAGATTAATTTCTTCATATTGGCTTTCTTGCTATGTTCTTTTAGCATATAA  
 GCTAATCCAGGAAAAGGAATAAACTGGAAGGAAAAATGCTTAAACCATTAAATATTGGCTGACCCCGG  
 TGGTAGGGTTATGAATGAAACATTTTGTCTTCTCCACTTTTTATATTTTCCAAATTGTCATATTAAT  
 CATGTATGATTTTTATATAATAAATTAATGAAATTAAGAATTAGATAATTGATTGAATTGGATAATTG  
 AATTAATAAAATTTAAGAATGAGAATAGGAATAATTGTGCTTTGAAAAGTCATATACACAAGATTTTAG  
 ATGGAATCAATACTAAATTTATATGCTATACTAAATCAGTAATTTCTCAAGGAGCAAAGGTGCTGGGGAG  
 TGTGGAGGAGCTCTTTGTGTGTGTCACATACAATTTAAGACAACATTTTCTTATTCCTCACCATTCTT  
 AACCATATCACCTAACAGCCTCTGGTAGCACTCAATAGACATCTGATGAATGAATGAATAAGTGAATGA  
 AAACATTTGTGACAAAATGGTATAACATTTTGTATTTGAAAATATATGAAAATCTATTCTTTTCAAATAT  
 AAAATGGGAAAAATAAATCAATAAAAAATATCTTGGTTGGTGAGAATACACAAAAGATATACCTTCTTGT  
 CTATGAATTAGTAATAAGAAATTTGTCTTGAGGAAGTCAACTACATCTGGAAGGTCTCTCTGGACAAGGA  
 GCATAAGTGAAAAACAGTGCATAAATTATAACCAAGAGTTGCAACTTACCATTTTAAATGCTTCAGCACA  
 GGCACAGAGACTTAACATTTTACTAAGCAAAACAAGAAGTCTTGGCAAGTTAATTAATAATGAATTTTGT  
 GGTGACCAAGGAGTTGGGCTTCTCATTTTAAACCATGCATGAGATTTTCCCTTTCTACCCATTACTAA  
 AATATCGTATTAGTGTGAAAAATTATACCAGGAGCTGGGAGAAAAAGAAATCACATCTGCTTGCATG  
 GGCTGAATGAAGAGGTGAAGGAGTGGTTTTACTATCTAAGTGACTGAAAAATAGGTTATGGTGCCCCAGC  
 AAATCCTTGTGTGTGTGCTGACAATTAGTGATGCTGTTTTAAATCATGCAGTTTTATTAGGCCCTAAAAAT  
 ATCTTTTAGTTAGTTTCAATTTTCAATCAAGGAAAAAGGAGAGCAGAGTAGAGTGGAACTCTGCTCAGAGTC  
 CGGTTGGAAGCTTCAACTTTGTCTTCCCTGTTTTTTCAGATGAGTGTCTATTTGTGGCTCTACCTTTTCTC  
 TTTCTTCTCTTACCATGACACTCCCTCTTCTCTTATCTTAGCTGTTCTTTCTTCTTCCGCATATTA  
 GGCAGTGGGAGAAACCCCTAAATCAGTTGGAGGTGAGGAAAGAAAGAACCCCTATCTTGTAGTT  
 CCTCATTTCTCCCTTCGTACGCTCCATGTCTCAGGCTCTGCCTTCATCTGCGATCTGGATACAATCCAA  
 TTTATAGCATCCATTCAACCAAAAAATATTGAGCTCTTACTATGTCAAAGTAGTGTCTGGATGCTCGGC  
 TCCATCAGTAAACAACCTAGACTAACATCTTGGCGTTGTTTACATCTCGTGGTGAGAGTTTACACCTTG  
 TGGTCTAGAAATTTACATTTTGTGGTGGAGGCAGGAGATGATTAACAATAAACTTAAGTAGGCTAGATG  
 TCAAAGGTGGTAAATGCTACAGGAAGAGCAAAGGTGAGGCCAGGTAAGGCAGATTGGCTGTGTGGGTG  
 TGGAGGAAGGTGCAAGAGTACTGTCAAGATAAGCCTTCTGAGAACATCTGAACCAGGACATGAAGGAC  
 ATGAGGAAGTGAGACAGTCTGCTATCCAGGAAGGAATTTCCAGGCAGAAAGAAAGAGCCAGTGTACACCT  
 TAAGGTGGGAGCATTTCTGCGAGACTGGAAGATCACTGGAGTCCATTGTACTTGGAGCCAGCAAGGAG  
 AAAAGATTGGAGGACTCAGGAGGTGCTGGGGCAGGTGAAGTCTTTTTGATTGGGGAGTTTACAGGGGTAA  
 TGCTTTGGATAAATGTAAGTGAAGAACTTTCTCAGAAAGTGTTCATACATCTCTACAAATTCATTTTCAT  
 GTGAAAACCTTAATTGGCGAGCAGATTAATATGGTGATCTTCCCTTAGATCACTAGGAAAAATCTGTTTTA  
 TGAATTTTCTTCCCTTTTCTTCTTCACTCAGAGAGAAAAAGAGTTGTAAGGAGGCCAGAAAAATATAGTA  
 GGTCTTCTCCCTACTACTGAGCTACTGAGACTGGAAGATGCTCACGTTAGCAACTGAGTATATTTATGTAT  
 TTTCCCTTTAATGTTTGAAGGTGAGGAATTTTGAATTTAGGATAGTCTGTTTGAAGAACATGATTCAA  
 CTAGCTACATGACTAACTAGCAGCTGTGAGAGAGAAATGCAAGGTCAAACCTTAGTAGTTGATAATAATA  
 AAGAAAGGGCAGAGTTTATGAAATGTTTATGATCTGGGTAAATCCATTGGCTCACTTTTGTGACGCT  
 AAGGTTACAAGATGATAAATTAAGTTGCTAATATTTCTATATCTACCATTACTTTTCTTCTTATCATGTGT  
 CTGGCAATATGCTGAGTGTCTACCTCTAGCATTTTATTCAACTGTGCAATCTGCCTGTGAAACAAGT  
 ATCATTAACCTTCAATTTAAGGTGAGAAAAATGAGGCCAGAGAGTTAAATAAGTTTAGGATCATATG  
 CATAGCTGGTAAGTACTACTTAAATATCCCTTGGCTTCATGCTTTCCTCCTCCTCATGTTTAAATG  
 AGCAGAGAGACTTATCTTTAAACAGATATATAGCAAGTAGTATTTTCCAAATGAATTCCACAAGATGCTC  
 CATTGCAAAAGTTCAAATAAGTTTAGAAAAATGCTGCAAACTTGTGCTTCTTAAGAGATTTACAGTGCA  
 GATTAGCACATTAAGCCTTTGGGAAATTTGTATTAGAAAAACCTTTATTAACCTTATTACCCCAATTTT  
 TCCAAGCTTTTGTATCAGCAAACTCTTTAAAAAACAACAGTATAATTGCTTTTATAGTATTTCTTTGGGA  
 TACACTTGGAGAAGTGTACATGAAAAGATATGATTGGATAAATTTAAATATAGGAAGAATTTATTAATC  
 ATTTTTTGGAAATAAAACACCAATTTTAGGTTGTCTAACATACATTTGAGCCAAAGACATGAAGGACATGAG  
 GACATAATTTACTTTTGTCTTGTAAAGGACATAATGCACTTTTAGTGGTTTGCATTGTTTATTTTCTTTT  
 GAATTTTCTGTTACTTTTAAAGGTAATTTATTTAATCAAACCTTTTGTAAAGTGCAGACACTATGGTAG  
 GTGCTGGTAATATAAAGAGAATATGTAACATCAACACAACATATCTCCTAGTATGGGCTTACAGTACAG  
 TGAGAGACACAAACAATAATTTTAGGATTGAAATAAGTCTTACATTTGCCACATCAATAAAGCACTAT  
 GGAACAAAGGCACAAGAACTTAACCTTTGTCCAATGAAGTCTTTCAGGAGGAGGTGATTTGGAGCTGAA  
 TTTTAAAGGATTCATAGATGTTTATCTGAAGGACTAATGCAACATGTTGGAGGTGAGTCTTTCAGGAAGA  
 GGCAACAAGAACCATTGGGTAACAAGATAGGACTTGGCAAGTTAGGGGAGTCGTAAGTGGTTTATACG  
 GCTAGAATCCAGGGCTCTCTGGAGAGATTGGGAGTACACAGATCACTCAAGGGTTTGGTATGAAGTGTCA  
 GGCTACTAAGACAGAAATAACAAAAATCAGATGTGGGTTTGAAGAGAGCATTTTGGCTGTAATACAGAAC  
 ATGATGGATAAATGATGGAGCGAGATTCTGGGAGATAGAAGAGGATAGGGCCATGTAAGTACATCTGC  
 TGGTATTTTAAATTAGAAAAAGAAATTTTGGTAGCAAAATCAGAACAGACCCACCAACTCTTTGCAAA  
 TCATGGGACTAGAATGTTTGAAGGAAGATGCTAACGATTTTCATTATTGTTTATCATCTATGTTGA  
 GTGTCTTCTTGGGCTTAGGCAGCATGCCCAAAGCTGGGAGAATAAGATACTGTATGAGATGCTAGAAAGA  
 TCCCAACCTCTCTTTCCAGAAATTCAGTATATCAGACTAATTTGGTTTACAGTTGTGACCATGGGCTTTT  
 GGCATAGCTGTTCACAAAGATTTTCAATCTTTTCAAAGCAATTCATTTCATCCACCAAAATTTTGTAA  
 CAAATGTACGTTGCAATTTAGTGGGTCTCAGGGAGCTGGATGTACATGCCAAATATGTTTCAATTTATT  
 TGAAGCAAGTCCACAGACAAGTAACTAGTCAAGTGATACCAGGCAAGGATTTGCTTTCCACAGATG  
 GTGACAGATTAATTTCTAAGAGACTGATCTGCCCCAGAGGCACTGGGAAAGTCTTGTAGGGAGGTAGA

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TTATAGTCAGGACCTTGGAAAATTGTTGGGAATAATTGAGGTCAGGAAGGGTATACTTAGGTGGATGGGG  
ACAGCCCCGTGAGCGAGGGATCAGTCCTTTTGGAGTGAGCACGGAATATTCAGGTGCCTGGGAGGAGTGAA  
GGCTTGTGCTTTCAGCACTGATTGTGTGCACCGATGGTGAACATACCTGCCTGCTCAGAAGCTTTGGCTT  
CTCTCTGTAGGTGAGAGACAGCCATTAGAAGTCCTTGAACAGGGAAGAAACACGGTGAAAGCAAGGATTT  
CATTGAGAAGTCCTCATGGAAGAAGAAGATTACATTGGAAGAGCCTGGCTTAGGGAGGAGCAGTGAC  
AATCAGAGAAAAGGCAGATAGGGGCAAGATACTGGAAGAAGAGGAAAACTGTCCAAAGCTTTGTCTCT  
TGTGTGGGAAAGCTGGTGTCTTGGCGTGAAAGAGGAAGCAAGAACATGTGCACTGACACGGCTGAGAGT  
CTCCAAAACCATTTGTCTTCTTAAACAGTAATGATCACAGCAGCTTACAACCTTGCATATAGCCACT  
GGGGCAAAATCCTATTAAGAGCTAATTTCATTATCTGAGCCAGTGCATGATAATGCGATGTAAAGGCGTGT  
TGGGAGGCAGATGATCAGAACCTTTAAGCAAACTAAATTTCAACATTTATTAGAAGCCTGTCTCTATT  
TCCAGAAAACGCTATATAATGTGGCTGTAATGTAGGCTACAGGTACACACTGAAGTAGAAGCAATGTA  
CAATACCTGAAAGGTTAGAGAAGTTCAGGGCTTGGGCTTATAAAAACTTCATTATTTCATTGAAAGATA  
TTGTTTTGTATCCCCCAATTGTGGTTTTCAATGTATATAAAAGCAGGATATCATACTTTTGTATCTATGG  
ATTTGGAAGGGGATAATGGTGTGGTGGGCACTGAGCATATGGAATTTTAAATTAGAGAGATGCCCTTTA  
GATTACTATAAAATATAACAGAATCTCCTGTTTAGACTTCTAAAATCTACTTCTTTGAAAACACTACTA  
AAATGACCACAAAGACCTGTCTCACAAAGTGGGAGCTATTAATCAATAGTGTGTACACATGGACATAGAG  
AGCAGAATAATAAACACTGGAGACTCTGAGGGGTGGGAGGGGAAGAGGGAGGTGAGGGATGAGAAATTAC  
TTGATGGGTACAATCTACACTATTCTGGTGATTGATTCTCTCTGTTTCTCTCAGAACTGAGAGGAA  
ATTTAGTTTCTCAGTCACCCTCTCCAACTCCTGCGTGGGTGATACAAGACTTGTCTGTCTTGTAG  
GCAGAAGGGGTTAGGGGATTTCCCATTTGAACCTGATAGCCTTCATTTTCATTTCTGTCTTCTCAGGGAAA  
CATTTACCCCTCTTTACTAAATGGAAGAAGGTTTGTAAACTAGGAGGGTATCTATGGATCTGATTGTCTCC  
TTCAACCTCTGCTATATATCCATGTACAAAAACAGCGCTTGTGGCCGGATACAGTGGCTCACACCTGTA  
ATCCAGCACTTTGGGAGGCCGAGGTGGTCCGATCAGGTGAGGTGAGGTTTCGAGACCACTGTGGCCAA  
TAGGGTGAACCCCTGTCTCTACTAAAAATACAAAAATTAGCTGGGCGTGGTGGAGCATTCCTGTAATCCT  
TAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGCCGAGGTGTCAGTGAGCCGAGAT  
CATGCCACTGCCTCCAGCCTGGGTGACAGAGCAAGACTCCATCGTGGGAAAAACAAACAAAGAAAC  
AGTGTCTGATACCCCTAAATCTATAAAATTTCTAAAAAATAAAATGACAATAAAGGAATGAAAAAGGCA  
TAGGTACAGCAGATGGGATAGGACACTAAAGCAAGCTGGAGTAATACTGGAATTTCTAGAAGGTAGAAGG  
CTTAGCAGAGCAGTTTCAAGTGAACCCAGCCTGTGGGGCAGGGGCATGAGCAGTGAGCCCATCTAACT  
ACGGGACCCAGATAGGCTTGGGATCTAGAAGCGACAGATGCCTCTAAAGGCTGGGGGTAGGCTGGGACT  
GAAAGCAGAAATTTGGTGTAAAGTCTTTAAAGGAGCAATTAGATCCACAATACCTTCTAGTTTCTAAAT  
ATTCTACCGCTTAGGAGAGAGGGGTAAATGACTCCCTGAAAACAGAGAAATGAAGTGAAGGCTATCATGT  
TAAATGGGGACAAACCTAGCCCTCTTCTCTCAAGACTGACAGGAAAGCTCCTACAACCCACGAAGGAG  
TTTGGAGGGGTGTTGCTGAGGAACTAATAAGTCCAAGAGAAAGAACCTTCAGAAACGGACATTTAAAG  
GATTAGTGTCCCAACCCGATTACCTAGAGATACACATACAGAAATGTGATTGGACAGTCAAGGATCACCG  
TATGATGCTTCTAACCTGAACAATAGACACCTAGTCACACACCCAAACAATCACACACACATACACAC  
ACACACACACTTACTTCACTTCTGCTGGAGGAATTTACAAGATGAAGAACATCTTGTATCTCTTTGGGC  
TACTGTTTGTGAAAGGAATGGTGTGCATGTGCTCTTGGCTAAGCCAACCTCCATCCTGAAGACAGATTTTGT  
TGAGGTGGGGGAAATTCGCCAGCCTTAAATAGTGTAGTGGTTGTCTGGGTCCATCCTGGTCTGTATTCT  
CTGCTTTTTCATTTTCAGATTTAAATCCAGAGTTATTACAGATGGTAACATCTGATGCCAATTTATGGAT  
CTTTTTCATAATTCACCTGCTAGGAATCTCAGGTAACTATAAAATATGCTTTTATTTGGTCATTTTAAAG  
AGTTACGTTTCTGAATTTCAAGTATTTTATCCTGTATTGTGACACATTAATTTAGGGAACACATTCATT  
GACATTTCTATGTTATTTCTTTGTTTCTTAAAGTCAAGTCAAGTAAATTTAAAAAGATAAGATCTTTCATT  
TTGTGTGTGATCCCACGGAATACTTTCTACTGTAGATTTATTAATAATTTCTCCACCTCTGGCCTCTGATT  
AAGGAATTGCAGAGTATTCTCTATGACAACCTATTAAACCTATTATTCCCCCAGGGCGGTTTAGTATAT  
CACTAAATATACTTTTAGTGATATTTGTTGATTGGAGCATAGCTTTTGTGTTTGCCAAACATCATTGATG  
TGTTTTGAGGTGATGTGGTTTGTGGGGGAGGGGGTGGTTGTAATGTAAATAGTGTCCCTCTAGTATTGT  
AATACTTCAAGGACATAGAATTTATTTTAAAGTCTTAAATCTTTTGTGTTGTTTTCTAGGAAATCTT  
GAGTCTATGTTCTTTGATTTGAGACTATAGAGTTTCTTGGTAAAGTCTCAATATTGGTTTTCTGAGTA  
AATCTTGTAGAATTTGGTGGGCTCCAGGATTTGTTTGTGTCATCCTGTTCTAATTAATAGAGAAAAAGC  
ATATAAATCTTAGATCTTTAGATCTGGGACTATTGCACTACTTGGCTTGAGCCAAAGTGTCTATTAAT  
TTTTATCCAGTAATTTGTGGCAACATATTGCTTCCAAAAACAATCACATTTGTAATGCAATTTGAGCATT  
TTCTACATGAAGGGCATTACCAGGGAGTGAAAGAAATATAAGGTCTGAATTTTGTCTCTGGGAGAGAAC  
ATTCTAGTGGGAGAGATGAGTTGTGAAAAGTTAAATAACAATATTTATAGATGGTCAATATAGGAACCT  
GCAAAATATTATTAAGATTAATTACATGTGAAAAATTTGTTATTGAATTTCAAGGCAAAAGAGTGAACCTAA  
ACTGAGTTGCACAGGAAGAACTCATAAAAAGGTGAGCTTGTGTTGGATGAGTGGATTGGGCGAGATAAAG  
AAAGACAGGAGCAAAAATAAAGAGGTGAAAAACCACAGGGGTGTTTGTATGTATGCAGGGCACGGAATCA  
GTTGTATGGTGGGGGTACCTTCAACTTAAACCTCTGTACCAGTTAGGGTGCCTGAGTTGTAAGAAGCC  
GAAACCAATTTCTGGCTCATTAGGCGGAGAAAGAAATTTACAATCCATGACTAGGATATATCCCTCCATCT  
ATTTAATCCCTGTTTAACTTTTCTTTATTTTATAGTTTGTATAGTTTCTATGCAGAAGACTTGACACA  
TCTTTCTGTTACATTTGTTTCAATAGTATTTGACACTTTTATGTTATTTAAGATTTTCTTTTTTTTTTT  
TTGAGACCGAGTCTCACTCTGTGCGCCAGGCTGGAGTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCC  
GCCTCCCGGTTACACAACTTCTCCTGCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCTGCCACCA  
CTTCCGGCTAATTTTTGTGTGTGTGTTTTTAGTAGAGACGGGGTTTACCCTATTAGCCAGGATGGTCTT  
GATCTCCTGATTTCTGTGATCCAACCGCCTCGGCCCTCCCAAAGTCTGGGATTACAGGCGCGAGCCACAGC  
GCCCGGTCAAGAGTTTTAAAAAATTTCACTTTTCACTGTTGACACTACATAGAAATACAAATAGATTTT  
TGATATTGTCCATGTATCTGCCAACTTGCTAATTTAACTTATTAATATAAATTTTATCTATGGAT  
TCTTTTGGATTTTCCAAATATACAACATGCCATATATGAGTAGTGACATTTTTATTTCTTCTCTCTAGCT  
CCGTAACCTTTATCTATTTTCTTGACCTACTGCATTGACTAGGATCCTTTACTACAATGGGAAGAAAAAG  
TGATGGTGGGCATTTCTTCTCACTCCTGATCGCAGGGCAGCATTTAACTTTTCAACATTATGAATGATG  
TTTGCTCTACAGATTTCTGTAGAACCATTATCAGATTTCAGGTAGTTAATCCTAACTTGGCTAACAGCAA

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TTAAAAAATGAAGTAATATAAAAAATTAAGAAATTAATATGCTGCTAATGATATGTTGTTGAGTAACATA  
AATATACCAATTTTTCTATATCTACTGAGATGATCATATGAATATTGTTCTTTATTACTATGGTGAATT  
GCATTCATTAATTTCTTTCTTTTCTTTTGGAGACAGAGTCTTGCTCTGTCAACCCAGGCTGGAGTGCA  
GTGGTGCACTCTGAGTTCACTGTAACTTCACTCTGGGTCGAAGTGATTCCTGCTCAGTCTCCCG  
AGTAGCTGGGATTATAGGTGTGCACCAATCACGCCGGCTAATTTTATATTTTAGTAGAGATGGGGTTT  
CCCCATGTTGGCCAGGCTGTGCTAGGAGAGATCTGGTGGGAGGTGATGGGATCATGGTGGCAGTTTCCC  
CTGGGATTACAGGTGTGAGCCACTATGCCTGGCTGGATTCTTAATTTTCAAATGCATTTTAAATTTCT  
GAATAAATCCAACTTGATTATAATATACTATCTTTTAAAGGAAAAGTAGATGAATCAGACTCAGCA  
AAAATAGGAGCCAGAATAGCACTGATACGGTTTGTCTATATCCCACCAATCTCATCTTGAATTGTA  
ATCTCCATAACCCCACTTGTCTAGGAGAGATCTGGTGGGAGGTGATGGGATCATGGTGGCAGTTTCCC  
TCTTGTCTTCTCGTGATAGTGAATTTCTCATGAGATCTGATAGTTTATAAGGGCTCTTCCCCCTTCGC  
TACTCACTCTGTCTCTCACTGCCACCATGTAAGACGTGCCTTGGCTACTCTTGGCATCTGCCATAAT  
TATCTGAGATCTCCCCAGCCATTGGAAGTGTGAGTCACTTAACTCTTTTCTTTATAAATTACCCAGT  
CTCAGGCGAGTTCTTATAGCAGGTGAAAATTAATAACAGCAACCATGGCAGGGGAAGGCCAAGCAC  
CTTGACTGAGTATATCCAATGGGAGAGGAGATTTTTTCTCACAGCAAAATCAGGACACTCACAGCTTTG  
TGTTTAAAGCTTGGGCTCTGAGTCAAGGCTGCCTGGTTTGAAGTCCAGTCTTCTCTTATGTGGCAG  
GGGACCTTAGCTCTGAGTATCCTTCTATAAAGGAGGATGATGTTCTATTACCAATAAGATCTAAG  
GATTAATGATACATTAAGTGACAGGTGACAGTCACTCTCAGCCATAGAAGTAATTATAATCCAGCT  
ATTATTATTGTTATTTGTGAATATGAGAAAAGAAAGTTCACTCTGACATCCTGTAATGGAAAATTCA  
ACTGAACATTGAAAATGTTTAAATCTGTCTATCAGAAAGTTTTTCATCAAAAGAAAACACTGAGTAGTC  
TAGTGTGTAGCTTGATCCAAAACCTTGAATAATTTTCAAACCTATTTATGATATCTGAAATATCAATG  
ACTTATACCTTTTGAATTTTGGCAGCTTTGTGGAGGTATAGCTGACATATAAGAACTGCAGATATTCA  
AAATGTACAGTTTATAAGTTTGTATGATGATATACAAACCATTAACCACTACCAATAACATAAGGAA  
CATACCTGCCCCCATCCACATTTGATGCGCTCTTTTAAATTTCTCTTCTACCTCCACCCCTC  
ACTGTTTACAAAAGAAATGTCTGATGGTGCCTGGGCGAGTCCCACTCTGCCTAGAAAACACCATAGAAA  
AAGACAGCAAAAGTGTCTTCTCACTCTGGAGTTCTACTTGATTTTAAAGGACATAGATTAGTGTGAACCA  
CATAAACCACTACTAAAATACAGGATTTGATCTAGAAAAGGTGATGCTAATAATGCATGTAGATAAAACC  
TAATTTTTTTCAGACACCAAAATGAAAATTATTAGTATGCCATGACACATGAACACTTTTATATTCCAC  
AACCACCTGTGCTCTCTTTTGGTGTTCATTTGCAATGGATGGAATGTTTATGTCCCTTCCAAATTTGTAT  
GTTGAAATGCTAACTCAAGATGATGGTATTAGGAGGAGAGGCTGTTGAGAGGTGATTAGGCCATGAGG  
GTGGAACCTCAAGAAAAGGATTAAGTGCCTCAGCAAAAGAGGCTAGGAGAGCTAGCTTGTCTCTCCAG  
CATTTAGGGACACAGCAAGAGGCTGCGCTCTGTGAAGTGAAGAGGCTCACCAGATACCAAAATTG  
CCAATGCCTTGGCCTTGGACTTCCCAAGCTCCAGAACCATGAGAAGTAATTTCTGTTGTTTATAAGCCA  
CTGATCTATAGTGTGTTTGTAGCAGGCTGAATGGACTAAGGCATTATTATTGTGAGTTCTATTC  
ACCATGGAGCATATGTGGCCTATGTGTGCTTGGCACTGAGGCAAGAACTGAGCAGAGTACGAGGGGAAT  
TAATAATGCTTGGACCTATCTTTAAACACCTAGAGTTTAGTAGGAATCAACTGGAAGTAGTAGGGTAAA  
GGAAAGTAGGTGACTTTTGTGAGCCCTGCCATGTGCTAGAGACTGTGCTAAAGTGATTTACCCACATTA  
TCTTATTGAACTCATGGCAAGCCTGTGTGGTAGGTCCTATTCTCTATTACAGATGGGAAAAGTGA  
GCTCAGAGACATTAAGTAATTTGCCCAAGGTTATAGAATTATCAGCAACAAAGCTGAAAGTGCAAAAGG  
CTCTTTCTAGTCAGGAGGAATTAAGAGAGCTTGGGTGCAGTGGCTCACATCTGTAATCCTAGCATTGTTG  
GAGGCCAAGGTGGGAGGATCAGTTGAGCCAGGAGTTGAGATCAGCCTGGGCAACATAGTGAGACTTCG  
TCTGTACAGAAAAAAGAAAAAAGAAAGAGCTTGGGATCGTGCCTCCTGTGACTCAGCATCACCTT  
AGTCTTGGTCTGCCTCCATTCTGATTTGCTTGCCTTAAAGCTAGTCATTGCTTCTTCTTGGTTTCTGCTAC  
AAGTTTCTGCCTCTCCCACTGGCCATTTCGGGGTCTCTGTTCTGTATGCACATCAATCCCTAGATT  
TCTGAGGTCCCAGAGGTGGGCTTCTGCTTAGTCCCTGTTTGTCTTCCAGGGCTAGGCATCTGGTCCCT  
TAGCCCTGGCACTGGGCTTCTCTCCCTGCTGCTTGCACCCCTGCTCGAGCTCTGCTTGCCTTTACTCTTGAGGGGAACCTC  
CCTGCATCCTGCCAGCTTTTACATCCCTGCTCGAGCTCTGCTTGCCTTTACTCTTGAGGGGAACCTC  
CTGCCCTCCACCTGTTGGACTGGTCTGGTCCCTTCACTGGTCTGCTTCTGACCATCTTCTACTCTGG  
TCTGGCCTCCCATTTTCCAGAGCTCATCTGTCTCCATGTGTGCTTCTCAGAGGCTCTGAGTTCC  
AGCTTTTCCAGGTCTGGCTGGTGGCAGGCAAAACCTGTCCACCTCTCCATTGAGTCTCTCACTAG  
CTCCTTTTGGACAGTTCTTTCTTTTGGGGTCTAGCTTGGCCTTGTGCTGATGAATCATTAACACATAA  
ATATGTGTCTTCACAATTAATTGTTTCCATTGGTGTGTTGCTCTAGTCAAGGAGGATGGAGAGGGAGCAA  
CATCTTGTACTGAATGCTTGCATCAGTAGAACTAGACTGCTTGTGCTTCCCGGCATGCTGAGGTCT  
CAAGAATAAAGAGTATCCCTGAAGACATCTTATCAGTCTTCCCTGGTGAACATTATCTCAATTTTCT  
CCTTTTAGCTTTGAGACCACTTTTGCATGATTTTAAATATGTCATTAATTAATAGATATAATTTTCTC  
TGTCTAGCCAAGCTGCTGTTAGAAGAATCTTGCATACAACTAATCATAAAAAAGACATTCTTCTTGCCT  
CTTTGGAAAGGAGCCTGTGTACCTAAGAGTGAGGAGTACACTCATTCTTTGTGCTTGTTCATCTGCT  
CAGGGGATTATTGATTAGCAGATAGAATGTGGGTGCAGGCTGGGCGCAGTGGCCATGTCTGTAATCCAGC  
ACTTTGGGAGGCCGAGATGGGTGGATTACTTGGGTGAGGAGTTTGAAGCAGCTTGTCCAACATATAGC  
GAAACCCCGTGTCTACTAAAAATATAAAATTAGCTGGGCGTGGTGGTGCATGCTGTAGTCCAGCTAC  
TTGGGAAGCTGAGGAGGAGAAATCGCTTGAACCTCCGAGGTGGAGGTGTCAGTGAGCTGAGATCGCGCCA  
CTGTACACCAAGCTAGGTGACACAGTGAAGTCCATCTCTCAAGAAAAAAGAAATGTGGGGGCA  
GATAAGTTTTTGGGGGTTGCTTTTAACTTTTGAAGAACTGGGCTGGCTGGCTGGGCACTAGAG  
CAATGTGGATATGGGAGCTGCTTGTCCCATGGATGCCAGGACAGAGTCAAGAGAGATGGTTAGAAA  
TGGTGCCAGGTTCTGCTGCTCGTGCAGGTGAGTCCCAACAAAGCCTTTGTACAAGACACATATAAA  
CCCTCAGAGAGTTTATGCTAACCCAGTGTCTTGGCCATGGCTTACTCATGATGAAAAGTGTATATTT  
TATTCTGGCCACATGGAATAATAGACATGTAATCACTATGAGATTTGAGTTGCAGGCTCTTGGTTCTA  
ATAACCTTTATAATTTTCTCCCTCATCAGGAGACAGAATAAGGTGTTTACATTACTACTTTTCTTTTGC  
AAGAATAAGATCGAGGTTAAATCTACAGTTATGCTTGTATAGACTGCAGCAGATTTCTGCATCAGTAGAA  
AGTGTGTTTTCCCACTAATCAGAAGAAAGTGTAGCCATAATGATATGGGTCCACTGTGAAGTAGA  
AGACAAGAAACAGAGCAGGAGTGGAAATTGGGAGCAATGAGAAAAGGTGCCCTAGAGTTGCTCTTGGCACC

FIGURE 1, sheet 19 of 94

[illegible]

[illegible]

TTCCCCAACCCCTCCCCATAACCACTGTGTTATGTTCTATTTCCGTATATTTGACTTAATAAAAAGATTCC  
ATATATAAATGAGATGATGCAATTTTTTCTGAGTCTTTGTTTATTTCACTTAGCACAATAACCTCCACC  
AGGCTCATCCATGTTGTGGCAATGGCAAGATCTCATTCTGTTTTTAAGGCTGAATAATATTCATTGTGTC  
CATTGTGCCATGAATTGTCACTTAGGTTGTTTTCCATATCTTGCGTGTGTGAATAGTGCTGCAATGAACA  
CGGGGGTGCAGATATCTTTACGAGGTGGTGATTTCATTCCCTTTGGATATATATTCAGAAGAGGGTTTTCT  
GGATCAGAGATTAATCTATTCTTAATTTTTTGAGAAAATTCATACCTGTTTTCCGTAATGGCTGCAGCA  
ATCTACACTGCCACCAACAGGGTACAGGGTTCCTTTTTCTCCACACGCTCACCAACACTTGCTATTTCCT  
GTCTTTTTGGTAATAGAAAGGGCAGGGCATCATTAATATGTTTCCCTTACATGTGTGAACAACACAGC  
AGAGCAGTTACCAGCGCTAACTCTGGAAGTGGCTTGCTCATGCTCATCTCTTGTCCTCGCCAGTTCCCTAA  
CTGCGGAAACTTGGCAAGTTGCTTAACCTCTCTGTGCTTCCCTTTGTTACTTGAGCTGATAAAAAATAA  
TGCTTAGAACAGTTACTGCCATATAAAAAAGTCTATTAAGTGTGCTATTATGTGTTGAATTCAGCTTA  
ATAGAATCATCATCAGGATCACCAGCAATTTATTGAGTGACAGTGTGTGTTTTATTCATTGATCGTCATT  
ACACTTAGAATAGGGTCGGGGATATAGCAGGCATTCAATCAATATTTTTGAGGGAATGAATTAATGAATG  
GGCTAGATGTTATATGTACAAAAGAAATATGTCTAATTTCTTCCCTCAGGTCTCAGAGATGGTTGAGAAT  
ACAAGATGGAGATAAGACGAAAATTAATGGTGCTTAATATGAAGCCCTTCAAGGCTGCCTCTTTCAGAA  
TCATTTAGAGGGCTATTAAAAATGTCAGATTTGCTAGCCAACTCTCCTCGATCTCAGTTCCATAGATCT  
GGACGTGGGTCCAAAACCTACAGTGCCAAGAAAGCTCCCGAGGGGCTTCCGGTGAATTCCTCAAGAACAG  
CAGGACTGGGATCGCAGGCCAGGCAGTAAATGATACAGGAGATGAGAGGAGGGAGAGCTCTGGGGGCTG  
ACACTGTTGGGAAGGCCTGGTGAGAGGGGAGGTACCTGCAAGGGCATGTAGGGCTTGGGCATGGGGTGA  
CTTGATCGTGGGGCTTAGACTGCAGTAGAGACATTCTGGTCACATTTGCCCCCCATGAGTTCCTTCCG  
TCTCCTGATGTGCCCCAGCAATTTCTATGTGCAAGTACACAGAGCCATTGTTGAAAGTACCTAAATC  
ACTCTATTTACTGATGCTTTTACTTGCACTTATAAATCTAAAACAAATTTTCAAGCAAATAAACAAAGTGT  
GTGGATATGGAGCAGAAATACCACCTCATGAGCTCCTGAACCTGGCCCTCTGACTCAGTAATAGTATCCT  
AAAACCTGAGTTCAAGCATCACATTTTATTTTTCAGGTTTTACATACCTCATAGAACTTGGTCTCTGATGTT  
ACAGAGATCACAGTAACAGTTTACCTTATCTCCAGAAATTTCTAACTTCTCAATGGTGGCATCTCTCATT  
GAACAGGTAGTCCAAATAGTCCACACAAAGACTCTCCCAATGTGTCATTTATTAACAAACAAACA  
GATTTGATATACAATTAATATACCACAAAATCACCATCTAAAATGTACAGTCTGGTAGTTTTTAAACATA  
TTCAGAATCTGCAGCTTTACCACGAATTAATCGTAGAGTATTTTCATCAGGAGAGCCAGGCTCCCTCC  
TACCTTTAGTCACTTCCCATTTCCCGGCGCCCTGATAATCACTCATCTGCTTCTGTCTCTGTGGAGTAC  
TATCTGGAAATTTATATAAATGGAATGATACAACTGTGGCCTTTTGTGACTGACTTCTTTTACTTAG  
CATACTGTTTTCAGGTTTCTATATATGAGCATGTGTCAGCACCTCATTCTTTTGTGCTGAACACT  
ATTCTACTATATAAATATACTTCAATTTCTTTATCCACTCATTAGCTTGTACACAAGTGGATTTCACCTT  
TTTGGCTATGTGCAAGTTTCTGTATGCATGCATGTTCTCATTTCTCTGGGTACCCACTTAGGACTGGA  
ATTCTGGGACATGTGCTAAGTATTTATCTAATTTTGGAGAAATCTTCAAAATGGTTCCCAAGCAG  
CTGCACTATTTTATATGCTTACCAGCAATGTCATGAGGTTCAATTTCTCCACATCTCAGGACATTTGT  
TATTGTCTTTGATTATAGCCATCCAGTGTGTGTAAGTAGTATCTTGTATAGTTTTGATTGCAATTC  
CCTAATGATAAATGACATAAAGCATCTTTTTCAGGCATATTGGCCATTTGCATATCTTCTTGAGAAAATG  
TATGTTCAATTTTTTCCATTTAAAAATTTGATGATTTTAAATTTTATTGTTGAGTTGTAAGGATTCTGTT  
ATATCTCTGGATGGATGAGCCCTTATCAAAATATATGATTTGTAATATTTTCTCCCATTTTGTGAATCTT  
TTCATTTCTTGATAGTGTCTTGGATGCACAAAAGTTTTAGTTGTGTTGAAAAACAGTTTGTATATCT  
TTTCTTTGGTTATTTGTGCTTTATGTGCATATCTAAGAACTGTTTCTAATCTGGGTGAGGACTTGA  
CAACTCTGTTTTCTCTAAGAGTTTTATAGTTTTCAGCTCTTATATTTAGGTCTGATTCATTTAGAAATTA  
TGACTTGTATATGTTGAGGTAGAGTTTCAAAATCTATTTCTGTCATGTGGCTATCCAGTTGCTGAGC  
ACTAAATGTTTGTAGTCCATTTTCTCTCCAGAGTCCATCTCCACCATATACCAGTTATTCATCTTATAC  
ACAGATATGATTATGTCCTTTCTTAAATAAAAAAATTTATTTCTTCTTCTAGTTTCTATAAAATAGTTCA  
AATATTTCAACATAAAATTTCCAGGTCTCTATCTAGCATGACCTCAACCCACCTCCTAATTTTACTGTGTTCT  
TTCTCCCACTTGCTACCCCATCCAGCCATCCTTGACTTCTTAGCTGGTCTCTTTCTGGCCTGAGTGAG  
ACATTTGGCCTGGATATATATGCATGGTATGGCTTTGGTTGCTTACTGTGGCATTTGGTCTTATGGGATA  
GCCATTTGACTTTAATTAATGGGGTGTATCAGCACATTTATCCTATTGAAATGACTAGAGGAACCCATAA  
GAAACCATATTTTAGGACTAGTAATCTATTTTAGCATCATTTGGAAGACAACAACTTCATTTTATGG  
GTAGACTAACATTCACAAATATGACATATATCATATAATCATAATCATTAAAGTTATATTTTAAATAATC  
AACCATCCACCATCCCAAACTTAAGACTTTGTTGGTAAGTTTTGTATGTCACAGGTTATATTTTTCAC  
ATTCTGACACCTACATTCAAGGCCTCAAATTTACCAGAGACTTTTTATCATTGAGGTAAACATAGAAGT  
CATTAATTTAAAAAATATATATTTTAAATATGTTAAAAACATAAAATATACATTTTACCATCTTGAT  
TTTTTAAAGCAGTTTACTAGTGTAAAGTATATTCAACAGATCTCCAGAGCTTTTCATCTTGTAACAACTGA  
AACTGTAACCCATTTACCAACAACCTCTTCCCATTTCTCTCTCCCAAGGCTGGCAACCCATTATTA  
TTCTTTCTGTTTCTGTGAATTTTACTACTTTAGATACCTCATATAAATGGAGTCATATGGTATTTAGCAC  
AAGGTCCTCAAGGTTTATCCATGTTTGCAGCACATGACAGGTTTTCTTCTTTTCAGGCTGAATAATAC  
TCCATTTTGTCTCTATATCACATTTTTTGTATTCATTGCTCTGTTGGTAGACATTTGTGTTGCTTCC  
ACTTCTTGGCTGTTGTAATAATGCTGCTGTGAACACAGGTGTGCAAACTCTTTGAGGACTCTGCTTTC  
AGTCTTTGGGATATATACAGAAAGTGTATATAGGATTAGGATTGCAGGATCAGATGATAATTTATGTT  
TTAATTTTCAACTTATCTTCTCGAATGAGAACATAAATTAATTTTGGGGGTTTGTGTCATTTTAGAC  
ATAGCTCACGAAGAAGATGGTAACTTTAAATTTGTCCTGCAACAATGATGATGGGCTTCAGTGATTGTCT  
TAAATGAGTCATCATTTATTTTGTGTTTTATAACCAACCTATGCATCTGAACACAAAAGTCAAACCTTT  
TTAATACCTCAGGTGATTTTACACCAAAATACAGGGAAAAGGCATCAATCAAGCTGCTTAACAGCTGA  
TATGATAGTGATTACATGTGATATGGTAGTTGAGACTGAAATGCTATTTGTAATACAAAGATTATCTTAA  
CTGAGTCTGATTTGAGGTGAAAAAGGTACTAATTAGGGTGACAATATGAATTTGATTTAACTTTAAAGT  
ATTATGAGAGAAAACATACTATGTCAACCTCTTTTGTATAACGAACCTGGGATTTAGGTATGGAGTGGGT  
AGAATAGTGGTCAAGAGCAGGGATTCTGGAGTCAAGTGTGTCACCAATCTGGCTCTGGCCATTGCCA  
GCTGCATGAGTGCCACTGGGCAAGCTTCTCAGCAGCAGATTTTTCATCTGTAAATACGGTTAATAAT

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GGATTGTGGTGGCATTACATGAATTAATATACGCAACATGCCGGAATGACATCTGGCAGGGAGGAAAAGC  
CATATAAGATTTTGTAAATTGATTTTCTAGCACAAAGCTATCCATTCTTAGGTTGTTGTATCTTCCTTGTGT  
CATCCCACATATCAATATTGTCATCTGCAAAAAATATACAGTATGTCTCTTTAACTAATGATTTTAA  
ATGTGGACTAATCAATGATCTAAAATCCCCCTTCCTTTTAGTCAATTAGTAGTTCATAAATTGAAGATGT  
GATGGATAGAACATTTTCGTACCCAGAAAGCTCTTAGATTGTAAATGCTGAGGGAACACTGGGAGATTTCAG  
TGAGTGCAGCAGAAATACAACTAGGTGACTGGAATAGTTTCTAATGAATGAATCACTGAATAAGCAGAT  
GGGTTGTGAAGGCAAAACCATGAGTAAATTTTTCTTTTACTACAGAAATATTTCTGAAAGGTAATATACC  
CAGGTTTATGATGATAGACCTTCTTTAACTCATGCTATTTTCTTCTGGGTTTGTGTCAACACAAT  
CTCATCTGCTCTTTGCAACCATTACCTCTCAGAATGGGTATGAAGATCAGGTGCAACCATGTATGTGATA  
ATGCTTCTAAAAGCTATTTTTCAGTTTATTGAAATATATTTGCATAAAAATATAAAATCCACCC  
ATTTAAAGTACAAAGCTCAGTGGTTTTCTAGTACATTCACAGAGTTGTGCGATCATTGCCACAATTAATTC  
CTTCTGCTCTCCATGGAATCTAATTTTGAACATTTTATATAAATAGAACAATACAATATGCAGTCTTTTG  
TGCTGGCTTATTTCAATTTAGTATAGTGTTCAGAGGTCATTTATATTGCAGCATGTATCAGTACTTCA  
TCTTTTTTATGGCAAATAAGACTTCATTGTATGGATATGTACTACATTTTATTTCTCATTTCATGAGTT  
GATGAACATTTGGGTTTCCACTTTTGGCTATTACAAATAAAATTTGCTATGAACGTTTGTGTGTGAGTTT  
TGTGTGGACACACATCTTTAATCTCTTGTATATGCCTAATAGAGAAATTTCTGAGTCATATGGTAAC  
CCTATATTTAGCACTTCCAGGAAGTCCCAATGGCTGTACGATTTTACATTTCCAACCCAGCAATGTGTGAG  
GGCTCCCAATTTCCCTACACTGTCATGTACACTTGTCTATTATCTGTTTTGTCATAATGGGTATGAAGTGGT  
AAAACACTGTAAGAAAGTGAACATATTCATGGAGTAAAGTAAATTTGAACATGCAGAAAGTATTTCTTCA  
GGCCAGACAGCCCCCAGAAATACAGTTTTTTTTCTAGAGTCTTGAAAGTTGTCTATGCACATATGAC  
GTATCCCTAGATATGATTTTGAAGAACACATGTAGGAGTATACATTTTGTATCATTCTTTATCACTTA  
ATAATATACCTAAGACAAATGTCTATAGAACAGGTTGACCTGCCTCATTCTTTTACTCTTAGCAGAGTA  
TTTTTTGTGACGATGTACCTTCGTTTCTGTTTTAAGCTTTTCTAATGAAGGGCATTTTGTGTGTTTGTG  
TCTTATAAGTAATGCCATGCGCATCCACAAGACATACAATTTGTTCTTGTAGTACATTTGTGAAGATATTCA  
CAGGAAAAAACAAAGTTATACGTCTATATACCACTCAACAGGGGATGAGAGTGCCTATTAGCCACAGT  
CTTCCAGCTTAACTGCTGTGTATTCAGCTTTTCCATCTTGGCCAATGTGGTAGGTAAAAAATAGTTC  
AGTAAAGTTGATTTGCTCTATAAGGGGCAATCAAGTTTATGTTATAAAGCTTGAAGTTCAACATTTGAA  
GTTGAACCTCAGATAATATGGTTAAAGCTTTCAAAATTTCTGAGAAATATGCAGGCATAGAGATTGTGTCT  
AAATTTGCCTTAATACATAGTATATCCATTGCTAATTTGAAGAGGTCATTTGTTTATTTATTATTCAA  
CTGGCATTATTTCAGCATTTATCGTATGCTAGGTGAACCTTAAAGTGTAGAGAGAAGGATGAATAAGAAA  
CACCAATTTGCTTACAAGTAAATATATAGTCTAATAAGGGGACATATATATAAATCAATAAGCATAATG  
GACATGAATAGAGGCAAGTATTATACAATAAGCTGTGTATATTAGGCCATAGGCTAAGCTACTGTGAAA  
AAAAAGGACCTCAAAATACTTGGGAAATGCTTTTTGGGAAAAGACAAAAAAGCTTGTGGAAA  
AGGGTGAAGAGTGACATGAGAGTAAGGAGAGTAAGCCATTTTAAAAAATTTTATTTTAACTTCGA  
TTGTCTAATGGTTAAGTGTACATATTCATGGGATAAAAAAGTAAAGTTTGTGACATGTGTGCTATGTGTA  
ATGATGAATCAGAGTAATTAGCAAAATCCATCATCTCAAACTTTATCATTTCTTTGTGGTAAAGCATTC  
AAAATCCTCTCTTCTAGTTAGTTTGAATATACGATGCATTTATGTTAGCCACAGTCACCTGCTGTGCA  
ATGGAACACCCAGAACTGATTCCTCTCACCTAACTGCAACTTTGTACCAGTTGATCAACCTCTCCCCATAG  
CCATTTCTCTTAAAGCAAGACCTCAAGTGATTAATAACAAGATTATTCTATAGAACATCTTATGGTGAC  
ATAATCAATATGATTTCAACACTCAGCTAATAAATGCTATGAATACAATTTATGTAAGGTGTTAATTGA  
CATGTGAGGTTTAAATACAAAAGGAATGAGGGAGGAGACATGAATATAGATGGGTGTTATCAGAGAAT  
GACACTTAGATACATTTATATTTGTGTATGTAATAAATACCTACTTTTGGGATATTTCTTCATGGTT  
TAGTTTTTAAATGTAGATTCAAGAGTTTATATATTTCAAACCTCTTCATGAAAAAATTCAGCTCTGGTTAT  
GTACATCCACATTTACAGGAATGAATTTTTCTTTTGTACACTTGTGAGTATATTTTCTTATGGCAA  
ACGTTTTCCAGAAAGCAAAAGTTATTTGTGTACTGTCCCTGATAATCGATGCTGTGTAATAAATCGTTC  
TCAGCAATGGCAGTTTGGACACTGATGGACAGTTGGTGACTGGTAATTTGTACAGTATGTTTAGTGGGAC  
GGCGGGCAAGGGGAAAAGTGGCAATTTGGTTCTCAGTCCAGATTTGGGTCATGTTCTCATAAATCTG  
GTGAGCAAGGAGCCTAATCTTTAGGAATTTTAAAGGTTTCTTTAGTGAAGAACATTTCCAGGTTGTC  
TAATGAAAAATATATAATGACCAGGTATAATTTTGCCAAGCTTTCCAACATAGTTTCTTTAGGGTGAG  
AAACAATCCTTTGATTTTCTTGAAGTAGAAGTCTCTTCTCGAATGCTAACAGTAAAAACAAGACCTTTTCA  
GACAGATTTTGTATTTTGGCATCAAAATGTGCAATTTTGAAGATACGGGACTTGAGAATCAGGTAAACTT  
CGTTCTGAAAACAGGCTTAATTTTATGACTGTGATTAGAAAGTTGAAAAAATCACGTTCTCACAAA  
TGAAAACAAAAGTCAGAGTTCAAACTGTTTATCTGTTTCTGTAAGCTTTTGTTCAGAAGGCCAAGGAT  
TATTTGAGGAGAACCTGGAAAATTAACCTCAAAATGGAGGAAAAAATGGCGTTTATGCAAAATGCAGCAAA  
AGCAGACAGCCTTGGAGAACTGAAGCTTAAATAGCGTAAGAGTCTGACTAGTCTTCAGATACTTAAA  
ACAGCATTGTATAGACAAGTTAGATATTTAAGGAAACATTTAATCAGCTTGGCATCAGCATTAGTGGCTT  
CAATTTTGGCTGAGCCTGACTTTGCCATATGATCCTAGACAAATTTGCCATAAATGGGTGATATTAAT  
TCTTTAGGGAAGGCTCTGTACTGGGATTTTTTGGAGGCTATGATTTATGGGGTCAAGCTATAAAACAG  
GAGGAAACACATGCTCATTTGTATATTTTACATATATTTGGTCCATAATGTACAGCTAGGCAATTCA  
TTTATTATCTGTTTGTAGAGTAAAGTTTGTATTATTTAATGTTACTACTTCTGGTTTTTCTCTCTCAC  
ATGTTCCAGTGACTCCTTTCTGTATAACCAACTTATCATCATAGAACGCATGTAATGCTGAGAATAAGA  
CACAGGGTCTTGAAATGAATGACAGCAATGGTGCTCCGATGGCAGTTTTGTGAGACTTTGAATGGTTT  
ATGAAATCACTGTTGATAAAAGTGAACACCTTCTACTGAAGGAGAAATTTAGGGGGGAAAAATCCCAAA  
TAGAAGGAGTTAATATCCAACTGGAGACTTACCTGGTAAGGTTCACTTAACTGGTAAATGTGATCCA  
ATTTAAACAAAGTATTTTGTGTTTCTCAGAACAAACATCCTACATAAACACAAAAATGATATGAGACA  
TAGATATACTTGGTTTCAATATTTTCCAACTATAATGTACCAGCCAGTTGGTACAGCACACCAGGA  
GAGAAGATCATTATTAATGTCTAATAGCAGCATTTTATTTTGAACCCACTCTGCATGTTTACAGGGCT

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CAAAACAACATATTCTAACAGGAAGATACATTACCGAAATATTTTAAATGAGAATATTTAATATGCATTGA  
GAGGTCCGCATTTTCTTGCAGAGACCTTGTAGGTAGCTCTTTGAGATTTCTGTCTCTATGCATTTAAGTG  
AAGGAGTTGGTTGGGTATTTTAGTTGGCAAATTTTGCAGACATGTAGCTTTGGTAGTGGAGAGGTAATAG  
TACCATGCCCTGCGTGCCTGGCAGGGAAGCCCCACAGCAACAGTGGCTTTTAGCAGCTACCGATTTGCTA  
AAAGCAGCCATGTCCAATTAGCAGTAAGTGCCATGCACCTGCAGTTACTAGGAATTGAACCTCTTTTGAG  
GCTGAATCTTAAATGTAGCTTTTAAAAAATAGCAAAAATCTTACTCATACTCTGAGATAATAAAGAAAA  
ATTAGCAATGGCAAAATGGACGCACTCTGAAATGTATTCTTAATAATGATTAGAAATATGGGGTAAATGT  
AGAGGCAATGACACATTTAACTGCATTATTTTAAATACTGTTTTATCAGTTTACTTCCATATTTTGAA  
TTCAATTTTCTATCTATACTGCAACTGCTTTTTTTTTTTTTTTTAGAAATCTATAATATTTGCTGCAGG  
CTCCCTATGTATGTTTCCATAATTTTCTGCAAAAGTGTTCACCAGAATAAAAAAATTACAGTTCAAA  
ATTGCAAACTGTAGAAAAATATGCTCTTTGACTTCTTTCTATGTGTCAAATTCACCACAATGGAAAG  
GACTACACTATAGAAATTAACGTTATTTTCAACAGATAGTACTTATTTTAACTGTGTTGAGCATTTAA  
AAATATTTAATATTTCTTTCTAAAAATGCTTACATTACAGAACTATTTATGAGGGTCTGAGCAGTATGA  
TGTTTCTTCTCTGATTTACTGCTTTTCTCTTTAGAGGATATTGTAGGAGAAAAACATTTGTTAAGCA  
ATTTCCAGAAGTCTAGGTTCTAATAAGACCAATAGGCTAATAATTCATTTCATTGCAACTGGAGTGTGT  
ACTTTTCTCTTATCTCAGTCATAATTTTAAAAAGAGCCAAGAACCACCAATCATCAATCTAATGTTG  
AACATGTAGTAAGTCTTTATTTGCTGATCATACTCTGAGATTACCATACCAATAAATCATAAGTATTAA  
AATTTGAGCTTTTAAACATACCCACTACACTGCTAGCCTGGTAACACAGTCACCAACTACACAGCTTCTT  
CAACTGTTGACGTGCTTTAAAGCTAGGATTATGGTATCCTGCCAAAAAGATCCTACAACTGTCTACTATT  
TTGGTTTGTCTGCCAGCCATTGAGAAGTAGACAATTTCTATATACACAAACAGTTTGGAAAAATTTATG  
CAATAGGAAGTTATTTCTCAAAATGGGTATTTGATTGCATTTTTTTTTTTTTTTTGGAGACAAGGTCTG  
ACTCTCGCCAGGCTGGAGTGCAGTGGCGTGATCTTGGCTCACTGCAACCTCCACCTCCGTGGTTCAGC  
GATTTCTGCTGCCCTCAATCTCCTGAGTAGCTGGGAATACAGGTGCATGCCACCACTCCTGGCTAATTTTTG  
TATTTTTAGTAGAGGCAAGGTTTACCCTGTTGACTAGGGTGGTCTCAAACCTCCTGGCCTCAAGTGATCC  
ACCCAGCTTGGCCTCCCAAGTGTGGGATTACAGGCATAAGCCACCGTCCAGCCTGATTGTGTTTTA  
ATGTATTTGGCTCCCAACAGTAGCAACAGTTTGGGTGCACAGATATTGCCGTAGTGTCTTATTCAATGT  
GTCAAAATATTATGAGTGAAGTTTGGCTTAACTTTGTTGACATGGAATTTCTATATCCTCCAGTTTCTGG  
TTTAACTGGTTTATGTGGAATGAATGGAACACATGGTTAAGTTCCCGCCTCCAGCTTCTCTCTTCC  
TCTTACCTATATTTGTAAGTGGCCACTTTTCTCTGTGGGCTGTCTCTAGAAATCCATATGTTCTGTG  
GGTGACATCAGCCTGCTACTGCGGGAAGAAATAGAATTTATGGTGCCCAAGATAAAATCGACTATGATG  
ATGCAGAAATGAAGACCTTGAAGAGGAGTGCAGAGATTGCAGGGGATAAAAAAGAGAGAAATCAGAGATGCTCC  
CACAAACAGAGAAAACCTTCAAGAGCAGCAGGAAGGACAGAGTAAATGGAGAACAAAACTCAAGTCAAA  
ATAGTCAATGGAATAAACAGTTTGAATTCAGTTATAATTTGGAAAAAGAGCAACCTTTATTTTAA  
TTAAGAAAAAGTGCCTTATAATTTCTGAAGTTAGAAAAAGTAAAAATAGTTAAACCTCCTGTTGTTA  
GCTAAGAGTGTCTATTATTATTAAGTTTGTGCTGGAGAGAACATAAAAAATCTCTATCTATTGCTATTTT  
TTTTTTTTTTTGCATAAGGGATAGATAAAAGAGTGTATTATTTATTTAGCCTTTGGCCTGTAAAGTAAGA  
TTTATGAACAAAGGACAATCGGAAATGATAAGAAATTTTTCCTAATTTCTAATTTATTAGCTAAACCTT  
GATTGATTTCTCTCAGGCTAGTGCCATATTACAGCAGCAGTCAAGCTTCATTATCTTACCTGGGACCA  
CATGCAATCCGATGCTTCTTCTTCTTTTATATTATGTGACCATTTAGCCACATTTACCTACTTTGAT  
CATTCCTCCATCTTGAGACCTCCCTCGACCCGGCTTCCAACATACTTTGCCCTCCTGGTTTTTCTTTCT  
CTGTTGGCTCACTTTCTCAGTCTCCTCTGCTGGTTGCTCCATTTTCCACAATCTCTCAAACTGGTGGT  
CCTCAGATTAAAGTCTTGGACTTCTCTCTTAGATTGACATCTGGAGTCATGGCTTCAAAACCCACCTAT  
CACTCCCTTTCTCCTTGAACCTCTAGACGTGTCCATCCAAGTCTACGTGACATCTCACTGGGATTCTTA  
AGAACTTTGCCAACTTAACATGTCTAAAACCAATTTCTGGGCTGGGGGTGGTGGCTCAGCCTGTAATC  
CCAGCACTTTAGGAGGCTGAGGTGGGCAGACTACTTGAGCCAGGAGTTCGAGACCACTGAGCAATAG  
AGAAAAGCTGTCTTACAAAAAATACAACACTTAGCTGGACGTGATGGTGCATGCCTGTAGTCCAGTTA  
TGGGGAGGCTGAGCGGGGAGGATTGCTTGAACCTGAGAGTGTGATTCTGCAGTAAGCTATGATTACACC  
ACTACATTCAGCCTGGGTGACAGAGTGAAGCCCTGCCTCAAAAAAAGAGCAAAAAACCAAAACCAAA  
CCAAAAAAGAGCAAGAGCAAAACACAAAAACATATCCAATCTCCCTTTAAACCTCCTCTTCT  
TACAATGAGTCTATCTTGATTATGGCAGATCTTCTTCCAGTTCTCAAGCCAAACACCATGGGGTCA  
TTCTTGAATCTCTCTTCCATGGGCTCATCTAAACATCAGAGTATCCTGTTGGCTATCTGGAATTTAAC  
ACTTCTATCACTGCCATTGCTACCCACCTGCTCTTAGTTATCACCAGAGTTCCTGGAGTGTGGAGCC  
GCCGAGAGCTGGTTTCCCTGCTCCTGCTTTCTGCCCCATGCTCTGTCTGCGAGTCAGCTCTGTCTT  
TAAAAATGGAATCAGGTACCTCATGACTCTTTTCTTTCTTTTCTTTTCTTTTCTTTTCTTTTCTTTT  
TTGCTCTGTCATCCAGCCTGGAGAGCAGTGGCATGATCTACTCACTGCAACTCCGCTCCAGATTC  
AAGTGATTCTCTGTCTCAGCCTCTTAAGTAGCTGGGATTATAGGTGCCAGCCACCATGCCAGCTACTT  
TTTGTATTTTGTAGAGCAAGGGTTTCGCCATGTTGGCCAGGCTGGTCTTGAATCTTGACCTCAGGTG  
ATCTGCCCGCTTCAGCTCCCGAAGTGTGGGATTACAGGTGTGAGCCACCGCGCCAGCCATGACTCTT  
TTCAAAAATCCCATCTCTCCACTTCCATTGATTAACAGTCAAGTCTGATGGCCCCCTCTGACCTT  
CTGATGTCATGTTCTTTGCTACCCCTTGAAGTGCATTGAACATGCCTCTGACCCAGAACTTTTCTGTTGC  
TATTTCTCTCAAGTGCATATCTTGTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT  
CCTTCCCTGGCCCCATATTTAACTGCTATCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT  
ACTCCCTTACTAAATTTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT  
TAGGCTGGAGCGCAGTGGCGCAATCTTGGCTCACTGCAACCTCCACCTCCTGGGTTCAAGCAATTTCTCT  
GCCTCGGCCTCCCGAGTAGCTGGGATTACAGGCGCGTGCACCATGCCTGGCTAATTTTGTATTTTGTAG  
TAGAGACAGGGTTTCTACAGTGGTGGGCTGGTCTCCAACCTCCTGACCTTGGCTTCCCAAGTGTCTGG  
TATTACTTCTAAGCTCCTGTGTATGCTACCTATTATTGTCTGTCTCTACACTAGAATAAAGCTG  
CTATGAGGGTAGACTTCTTTGTTTGTCCAATGCTCTATTTCCAATATTATTAACCGTACTGGCCGGTAG  
GTACTGTCAATTATAGTTTTTGAATAAATGAGAGTAACAAATTTCAACTGGTGAAAAATAAATTAATGG  
GCCGGGCGTGATGGCTCAGCCTGTAATCCAGCACTTTGGGAGGCGGAGGCGGCGAGATCACTTGAGGT  
CAGGAGTTCAAGACAGCCTGGGCAACATGGTGAAACCCGCTCTATTAAAAATACAAAAATTAGCTGG

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TCAGAAATCACAGGGAGGGTGTGTTATGACACTGAAGGCCGGGCCCCACCCTCAGAATTTCTTATTTCAGTA  
GATCCAGGAGGGAGTGCATAAATTTGTTATTTCTAAAAAGCTCCCAAGTGAAGTTGATGGCTGATCTGGAG  
ACACACCTTGAAATTTCTCTGCTTACTCTAAACAAAACGCTGCTTTTTATCTTGAGTGCACATCAGAACC  
CTCTGGGGAGGGTAAAAAGTCCCAAGTGAATACCAACCTCTGCAGATGGTAACAGATCTTAGTGGCTTTT  
AAAGTTCTCCAGGTGCTTCCATTGAGCAGCTAAGGTTGACAACACTTCTAACACCGCTTTTCAGGTGAAAA  
AGAACTATCAGTTACTTAACCTTAAATGAAGAGAAAAATGAATTCATCATCTGACACCGTTATCTATTCTTTT  
ATGCATGGGCTTATCCTATGAGAAATAAACATTTACTAAGGTGTATGCATGTTTTTAGAACATCCATTGG  
GAAGCATGTTGTACAGCTTGTAGTAAAACAGCATGGTGCATGCTGAAACTGTTATAGGCTTTGCAAGTTA  
TTTTTTATAAATAGTTTTGCTGGTGTGCTGTTTGATTATTGGAGAGTGGTGTGAACATGTTTCTATGCA  
TCCCAGGGGGTGTGCTGACCTTTAAGGGGCCCTCTTAAATCCCAGCTCTTTCATTTACAAATTTCTATGA  
CCTTGGAATGAGTTTCTTCACTTTTCTGTGCCACAAGTTCTCAGTAAATGGAGATAATTATAGAACTTAC  
TTCATAGAGCTTTGAGAATCATACAGGTAAAGTTATTTTACGTAATTAGCACTCAAAAGTGACCATTAAAT  
AATCTAACGTTTTTAAAAATATATTAATAGGCCAGATGCAGTGGCTCACACCTGTAATTTTCAGCACTTTGGG  
AGGCTGAAGTGGTGGATCACTTGAGGTGAGGGGTTCAAAGCCAGCTGGCCAACATGGCGAAATCCGT  
CCCTACTAAAACTGTAAAAAATAGCTGGGCATAGTGGCGTGTGTCTGATGCCAGCTATTCAGGAGGCT  
GAGGCAGGAAAAATCGCAGTGAAGCCAGATCACGCCACTGCCTCTAGCCTGGGTGACAGAGTGGGACTCC  
ATCTCAAAAACAAACAAACAAACAAATTAATAGTTTAAATATTTTTAATATATTTCAATATATAAAGA  
TGTAATTTTTATTTTAAATATATTAATAGATAAGTTTAAATACATAAAGTAAATATATAAATTAAT  
ATGTTAAATGAGTTTCTGAAAGTTTACATTTTTCTCTGTATTGCTAAGAGCAATTTATTGCTTTATGT  
TGTGTAATATCTAGAAAAACACCTATGTAATTTCCAAATTTATAACCACCTTGGCTCCTGGACAAGTAGG  
ACTGTGTCTGATTTTTTTTTTTTGCATCCTTGTCACTACCTGCCACTCTGAGATCACTTGTGTCTTTCCA  
TATATAATCACCTCTAGGTACACTTCTTTCATTATTTCTACGCATCCTCTCCACTTTGCTGCATTTCTGT  
GTGCATTTCTTTTCTCCACGTTGGAAAGAAATATGCATATTGAGCGATTCCAACCCCCAAAGGCAAAAAAT  
TACTAGCCAGTGTGAAAAATGAAGCAAGGAATTTTTTGGTTATTGTTGCTGTAACCTTTTTGATGTGCGT  
ACATATGTGCGTCTTTTTTTTCCCCCTAGGGGTGGAATGGGGTGGTGTAGTCAAGGATTACTGACAGGA  
CGGTGTTGCCTACTGTGTTGGAGAGACTAAGACTGGGGAAAGATTCTCCAAGGCTGGGAAATGCAGACGT  
CCAGTCTTGGAAACACTTTGCTGTTGGTTCGTTTGTATGTGAGAGAGGTGTTATCTTGGAAAGGCGGCT  
CAAAATATACCCAGAGCCAGGTGCTTTCTAAGACGAATCAACATTCACCTCACAAAGTTCAGCTAATATA  
TGACAGAAATACAAGAATGAACAAGACTCCTGACTTAAGCTTACAGCTGATGGGAACTTGGGAACTGGA  
CAGAGAATTAATAACACGTTGGTTAGGTACAACCTTACCTGCGCCAGAGGAGTGACGGAAGGCGCTTGGAC  
GGGAGTGTATGCTGGAGGATGACAGGGCGACAGGTAAAGTTAGGGGCTGGGAAGGGGAAGGGCGGCCCT  
GTGGGTAAAGGGAAGGAGGTTAAAGTCAGCAGGGAAACAGGCAGTTCCCTGTTGCTGGAGCAAAGCGCGG  
GGGTGTGCTCTCTGCTCTGCTGCTTGTGCTCAACAGGCAGATTGGCAAGTAGGGCGACCAACCGGCC  
TGGTTTGTCTCGGACCGGGGTTTCTTGAAGGTGGGACTTTCAATGCTAAAACTGGGACAGTCTTGGGCA  
AACAAAATCAGTACCGTTGGCCACCTTATCTTGTGTGGGCATCTGCTAACTGAGTCACTGGGCTGTCTGG  
TTTTATTTATTTATTTTTTTTCTGCTGAGTAACAGAAGAATGTGTTAAACATATGGAGTATGGAAGAAGA  
AGGAGAGGGGAGATAGATTTTTATGTTATAGATTGGAAGAAGACATCCTTGATGAAGGAGATGTTTTTA  
CTTTGGAGAAGGACTGCCTCAGCCGCGAAAGACCAAGGGGTGGCACCACAGGGAGAAGTCTGCACTGCGC  
TTCTCAGGCGAGTGGGGGCTGCTGAGCGCAGGGAGTCACTCCTCGCAATGAAGATATAGTCTCGG  
GGAGATAATGCTGGAATCGATGGAAGAAGTGAACAGGACACAAATTTAGTGGAAATTTCTTTACAATGT  
GTGCTTCTTGTCAACAGTTCGTTAACCATGATAAAACGGTTATGTTGTACATTTCATCAAGATCCAAAT  
TTTCTACCATTTTAAGATGTCTATCAGTCACAATGATGATCACTGAAGACCGAACGAGATCATTTCTCTCT  
AAAAATATGTTTACGTTATCCATAATGGCATCAGTGTCTGTACAGTTTGTCTTAATTTTGAGGTCAA  
ATACGACATTTGTAAATCTAGCACTTCATGTGATTCTGTAAGCACTAAACAGCTAAACATATTTACTTCT  
TTTTTTTGAATCAATTAGAACAGTGTGTACAATAGAAAAATAGAACAGTGTGTACAATGGAAACAGTG  
CTGTACAACAGAAATCTGTGAGCCACACGTTGCTGTTTAACTTTTCTAGTAATCAATAAAAATGTAAA  
AAGAAGCCAAATAAAGTAAATTTAATAATATTTTTGTTTACATAAATAGCTAAATATCAATTTTGAC  
ATGTTCTAAATATAACAATTTAATGAAGAAATATTACATTTCTTTGGCTTTGTACTAAACATTTGAAAT  
GTGGTGTACGTTTTTCACTTATAGCACACGCAATTCAGATGCTACATTTTATTAGGAATATTTAATCTG  
TAGATAGATATCGTAAATTTACATTTGAAAAAATAGATTTCAGACACCTAAGTTGTTTACAAGCATACTT  
AAAAATTTCAATGACTGAATTGAGTATCAGTTTTAAAAATTAATCAATGAAATTAATTAATGAAAT  
GAAAAATTTAGAACTATTCTCAGTCACGCTGGCTACATTTCAAGTGCTTCATAGCCACATGAAGGCTGT  
ATTGGACAGCAAGAAGTAGAATATATTTGGAATAAAAAATTTAAAGTGGACACATTGTGTTACTCTCGT  
TAGCCATGCTATTGCTATTTTTTTTCTATAGCTAATTAACCTTAAGATCCAGTAGGTTCTCCACCTT  
TTTTTAAAGCATTAGTTTCCATGTGACCCCTGTAGATGGCAGCACCTTCTTCTTAAACTACATGGAGGAG  
TTGCTGGGCTTGTCACTCAGATTCTGGCACTTTTCATAGAAAGAGTCTGAATTTATCTGGAAATTTCTTT  
GGTAACATAGGTGAGAACTTTTTCAGTCTATTGTTATTTCTGCACAGATGGCTGTTGCTTATGAAACAA  
TCTCTCAGCCTCTAGTCCAGGATATTACTCATTCCTCAGTTCAAGAACTCTAGGGTGGAGGAGAAAGG  
GGTTCATTTACAGAATGTTTATCAAAATGCGTTGGTTTATGCACATCCGTGTTTTGGACATGGTGATTCC  
AAGAGACTCTTAATAAACTTTTCAAAGTAGATGAGAGACAGTTTTTCCCTCACATGCTGTGGCAATATT  
AATCTATGTTTTCATGTCCACTGGACTTTGTAATTGAATTTTAAAGGAATGCATACAGGGCTTCATATTT  
ATATATAAAATATCCATATCCAGTGTGAAAGAAATTAACAATAAAATATGTACCTGTATAAAATTTGTG  
ATTTTTGAAGCACCCCTCTCTCTCTCTCGCATTTGTTGGTAGGAGAACATGAGACAAGGAACGAG  
GTACTAAGGACAAGAAGGAGCGATTGAGAGGTGGATTTCTGAAGACCAACACATTTTTCATAGCTC  
GTGAGGACTCTCTGATACTAACTCCAATAAATGATGTTTGGTGTGTTGATTGCTTTTGTATTGACATTT  
AAAAATTACAGGAGACTGAGATAGGAGGATTGCTTGAAGCTGGGAAGCGGAGGTTGCACTGAGCCAAGAT  
TGCAACCACTGCCTCCAACTGGGTGATCGAGTGAAGCCCATTTCAAACAAACAAAAAATAAAAAAT  
AAAAAAAACAAATAAAATACACGCTCTTTTTTCACTCAATCTGTTTTCCAAATAAATATCAAGA  
TTCTATTTGAATTTTAAATGATTTTTGCTGAGTTTTATAGCTTGAATACATATGGCAAGTATAATGCTA  
AAATGCTGTGATTTTGAATTTAAGAAAAATTTACAGTTTTCTTAATATACTCTTTAGTTCTTTTAAACTC  
TAATACATGAATGGATTGCTAATGAGGGTAGGAAGGGGAAAGACTGGGAGAAAAATAGCTAACTTTT

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CTAGCGATAGATACATGTCAGAAGCTGTAGTAGGTTCTTTTGCATGTGTTTACTTACATTACCTTCTGT  
ATCTGCATTGCAATTTTTTTCATAGACAAGGAAACCTAGACTTAGAGAAGTACAATACCTGTCATCTCGTA  
AATGACAGATATAGTTGAGCAATCTACTGAAATGGTTTAGCTTCTTATCTTTCCAGACAACAGATAAGG  
ACTTATTCTATATGAGACATCTGAGAAATGAAAATATGGTTTCAGGTTTCATAGAATCTTTTACACCACG  
TATTTCTGGTCTCTTTCTTCTATTTCAGATCATTCTTTTCATCTGTTTCTTTTGTCTTCTTTTCCAAAATG  
TAGCAATTTGCCCAATTCAGTACTTGTCTCTTCTTCTTAAACAATCACATCCCAATCCCATGGCCTCAACCA  
TCTTCCCTTGCATATAATTTCCACATTTACAACCTTTATTCTCTTGATTACTCAGGATAAGATAAATTGCTG  
AACAAATAACAGCATATATCTCAGCTTAAGAGAGTAAAGTTTATTTTCTCTCATGCAAATTCATTGCTG  
AGATATTTCCCACTCTCTTCCCTAGGTTGTCTCCTCAAAATGCAGTGACTCAGGGAACCTCTCTTTCTGTCT  
TAACCTATTTTAGGCTTAGACCCCTTTGGCAGTCTGGTGAAGCCAATAATCTCCTCTCAGGACAGTTT  
CTAAATGTGATAAAAGAAAAAAGATATAGTGACAGATCTAATAATTAATAATCAAGTTAATTTCAAA  
TTAGTGATAGGTAATATATTTCAAGATGTCTGCACTGAATACAGCGTGATAGGTAATATATATGATTTA  
TCTTGGTGACAAAGACATTTGGTATTGTAACTATTTATAGCTGCCATCTGTATTACAAAGGGAGATGT  
CAAATTTCCAGTTAAAAGAAAGATTTCTTAACCCAGTTTCATAGGACTTCCTGAATGGTACAGATGCTAA  
GGTCTAGTGGCTCCACAACCTACCAAGCCTTCTTAGTGTCTCTGCTGGATCTTATGCATCCAATTGACT  
GACAAGCAAAGAACCTGCAGAATAATAGGAGACATTTGTTGGGTGGGAGAGCAAACCTAGAAGGGGCAT  
ATACCCCTTACAATTTATAGCTCTATGCGCTAGAATTAGTTATATCATTTCTCCTAGATATGAGGGGACTA  
GGCACTGTACTTTCAGCTGTGTGCTCCAGGAAAAAGGTAAGGTATGGGAATGTGGAGCAATAATTTATTTGA  
AGCAAGAAATCACAAAGAAAAAAGATATAGTGAGGAAAAACAGGACCAAGGATATTTTAAAGT  
CTCCAAGTACCTCCACATAGGATACTTATTAATTGCAAAGGAAAAATAGTAACTTTACAGAGAAGAAGAA  
ATCTGGCAGACACTACCATATCCAAGTGATCAAAGGTGACATCAGTAGTGGGACACATTAAACATCATGTG  
CTTCTGATATGATACAAAGGAGAAACAACCTCATTCTTGTGATGTTCTTGCCAAAAATCCATAACCTG  
AAAGAAGCATCACAAATCCCAATTTGAGGGGCATTCCACAAAAATAGCTGGCTAGAATCTTCAAAATTG  
TCAAGGTATGAAACAGTTCCAGACCAAAGGAGGCTAAAAGAGACAGGATGCCCTCAATGCAAGTATAATCC  
TGAATTTGGGTCTTTGGGTGAGAAATGGGCATTAGTAGACAAATTGGCAAAATTTGAATAAGGTCAATAGA  
TTTGAAATAATACTGTACCTATGTGAATTTCTGACTTTGATCAAAGCACTGGGGTTAAGTTAAAACAT  
AAGATTGTGTTGTTTGGAAATACATGCTGTCTATATGCAACTTACTCTCAAACATCTCAGAAAAAATAAG  
ATAAGTTATAGATAGATAGATGACAGGATAATAAAGCAAGTGTGATAAAATGTTAGCATTTGGGGAATG  
TAGGTAAAAGTATATGGGAATATTTGTACCATTTTCTCAACCTTTCTTAACTCGTAAATTACTTAAA  
AGAAAAGCAATAACCTGGCTCTTATAAACTAAGGAAAAATGGTCCATCCTTTCTGTGCCTTTGTGTTTT  
CCTGCTGGTCAAAGAACCTTTTGGTAATGAGGCAATCTGAGTTGGTCACTGATATTCTAGTAAATTCAGAA  
TAACTTCTGGGCTATGTAGAAAAATATAGCTCTTCATATTTTAATTCATTTTCTGTGACAGCAGCTTTCT  
GTGCTTTTATGTATGGATACTGCCTAGTAATGTGCACACCACTGCTGCAGATCCTGGAACATTTTATTAT  
CTTGATATTGACTTACGTATTTAGGTAGATCTGAATAGCAGAATTGTGAGTCTGTTTCCACCAAGACATTAT  
CGGAAATCTGGACTTGAAGTCTACTTCTGCCAGGCATCTCTCCAGCTGGCTTCTGGGCCACAGAAGA  
AAAGATCTAATCAAACCTCATTATTAACAAAGGCTTATAATATTGAATAGCAGCTCCAGGAATCTAAGA  
AAATGTTCACTTTTATTTCTGACTAAGGAGGAACCTATTATAGTCTTTTATACCAGTTAGAAGTATGATG  
TTGGTATTAAACTTATTTCAATTTCTCAATAGCCCTGATCTGACTCTGACCACATGCGCGCACACCCCTCC  
CCCAACCTCTCAAAGTGTGATTATGGTGAAGGGAAGTTAAAGTGGAGTGAATGGTGAGTCTGGAATGAC  
AGAGAGCATTTAGCATTTGTAATTGACAGAGTTGGTGATTGACTGAATGGACACTGAATATCTAGGCTAA  
AAGTAATGAATGTGGATGGTGTAGTGAGATGGAGAACACTAGCAGGAAGATAGACTGGGCTACGCGAGG  
GCTAGATCATGTGTTCACTGCTGGGATATACAAAGTTTGGAGTTTCTGTAAAAATGCCATGTGAAGATGTC  
CAATTGGGAGTTGGATTTTATTTATTTTCTTCCATTCCCATCAGATAAGCTTTCAGAGGAAATAGAGT  
GTAAGATTTTGTGAACAACAGGAAAGGAAGATTGTAGTAAGATATGATGGCATAATGGTATATGGAAGA  
GTTTTAAATAAAAGTTAGCCAGGCATGGTGGCAGCGCTCTGCAGTCCCGCTACTCGGGAAACTGAGGCA  
GGAGAATCGCTTGAATCCGGGAGGTGAAGTTGCACTGAGCCAAGATCGCACCCTGCAATCCGGCCTGG  
GGCAGAGAGTGAGACTCCATCTCAAAAAAAGGGAAGGATGAAGAGGATGAGGAGAATCAAGTTA  
TATTAGCCTGAATGGAATAGATGAGTGGAGAGATGGGCATGATAGGTGAGTTAAGAAGGAAATCTTTTGC  
CTCAGCAACCACTCAGATGCTTTGTGAATCTAAATTATGTGTTGACATTCTAGTAGACCTAGACCTGGG  
ATAAATCACTTTCAGCATTATGTAATCTTAATTTTCTATTATAAATAAGAAAAATATTATGCAATACTTGC  
CATAGTTTTCTAAAAGCTGAACTCAGAATGTTAATGAAATTAATAATGGGAAAGCTATTTTGCTTAGAAGA  
TATTTTGTATATAACATTTCTTAAATGAAGAGGCTCTAGAATATTTATTTTATAGAATTTAAAAATATAG  
CCATCACTAATAAAGGAGGCATAATTCCAACGATTTTCATAACACATCAGTTATTAATCTAATTAATAT  
ATAAATGTAACATAATGTAATTTAATATAACCCATAATCAATGTTTAACCAACTGAAGCTGGTTAAACT  
ATGAAGAAGAACTCTCAAATTTGACCATTTCTTTCCAAGCGTTAAAGGTGATACGGGATTTTGTCTATACA  
TATAGAGCAAAGGAGAATTAAGCCAAGATTTAGAATTTTAGGCAAAAAGTGTATATAGTATCATTAAAGTG  
GTTACATATGTAATTTTACTGTTATAAATATGACTGAGTCAATTTTTTTTTTCAAAGATTTTGTCACAATG  
GGAGGCACAAGGAGTTTAGACAGATGAAGACTCTTTCTAGAAATCTACCTAATCTATCATTAGACCTG  
GAGATAATTGGTTTGACAATTTTCAGTTGTTTCTCAGCAAAAAAATAAGAACTAAAAGTGTTTCAGATGG  
CAGAGAAAAAGTTTGAAGAGGAGAGAAAGAAACAAAAAGAAAAAGGAAACAGTAGACATATAAAGAA  
AGCACCTAAACAGTGAGATGCCCCAGCTATGCACCAGCAGCATGGTGGATTACAGTAGAGTTTTTCTAC  
AGAACTATTGTAATCACTGGAAAAATAGTGCCAACCTTATTGCTTAAAAATTTTCAGTTAATGTGCTCCA  
CGACATCTGTAGACACAGACTCTCACTCTCCCTTATTATGGAGGCAGAGCTGTTTCTCTTTGCTCCG  
TTCTCTAGCCTGTGATATACTTTTTATGTCTCAAGAGCTATAGAATTGTATCCATGCTTATTGTTGCTCCT  
CCTGATGGGAATTCATGTAATGAAAGCGTTTATCTCTCTTAGTAGAAAAATTTGGGCACTTGGAGGCAA  
TGAAAAATCCCCACCTTTTGTCCACGGCACTGGAAATCTCTCAGTCTGCTTTGTTCTAAAGTTTCTACT  
TTTCCAGTATAACCTGTTGAAAAATTTAGTCTTTCATGAGAAATACGGCTGGAAATTTCTGTGGCAGGCT  
GGCCGCCGGTGTTCATGTAGTTACACCTTTTGTGCTATTTTACCACCTGATCAAAAAATAAAATTTGATTT  
TTTTCAAAGAAACATGGAATGACATGAAGAAAGTCTTAATATATCATGGAGTAAAAACAGCAAGTTG  
CCATGCAAAATGTCAAATAGATCCTATATTTTTAAATAAGCAACTGCATATGTATCATTTAAATATATATG  
TTTAGATATTTGCTAAATATGAACCGCAGTTACCCCTGGGGAGTGAGGTTAGGAAAAAGTAAAGTGAGAT

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TTTCACTTTTACATTATACTTTTACTTTTACCCACTTCTGTATTGTTTGAATCTTTAAATGAACAAGT  
GTTATTTTGTAAATAAAAAACAACACTGACAAATAACTATGGGGAGTAAGAAATTACTTGAATGGA  
ATATGTTTAAATAATTAATTTGTTGATACACTGCTTGACTATTATTTCTTTGCTAAATCAAAATCCC  
CTGCTTTTCTCAGGAGGTGTTTTGAAAAGAAGGGTAAATGTTTCTAATGAAATGAACAGCTCAACCTTC  
CCACCTCCTGCCTAAATGCCTCATTTTGGTTTTGTTACTAACAAATGCAACACGCAAGGCTTTATGGTAA  
AGCAAGCAATGTGGGTTTCTAACAGGGCAGTACACACCCGTAGTTGCTGGGAAACCACTTTAGTAATGGT  
GGATTTATTGAATTTGGAACAGGAATGGAGATTGGAACAACAGGAAGTGAAGTACCTGTAGGGGTCTCAG  
TTGTCCTGGGCACTGTGACATGGCACCACAAATGTCATGCAAGAGTGGCCCTTCCAACATATGCACCAATC  
TGAATCTCTCCAAAGTTTCTTGATTACACCATAAACAATGAAGAGAACAGCATTGCCAATAACTTCAGT  
AATAACTTTTGCATCATATTACAAAGGGTGGTGGGTGGCACTTTGTGTGGTCATGGGTATGTCCAAAAGA  
AGGGAGCTGGTGGCTAGACTCAGTTCTCCTTTAGATTTTAAGGCAAAATTTAGCAAACTCTATGGCAGATT  
CTTCAACTATTTTGTGACAGACATTGTCTACTTTTCTGGGGATTATGATTGAGGCCCTTTTGGGGG  
AGCTTTGAGTGCAGTGAGGCCAGATAGAAGGGCCAAGAAGGATGGGAGCAGCTGCATGCTAGTGAGCAAT  
TCAAAGTTGGATTGTGCTGACTGGAATAATCCCGGTTAGCAAACTCACTATCACAGACTTCATATCTTTT  
CAGATGTGCAGCCTTTATAACATATTTGTAATGCTAAAGGACTGCTCCACAGGGAGGTTACAAAGAGAA  
AAGCTCTGGGTGGTTGTAATAATGGACAATAATGTAAGCCTTACTAGTAGCTTACCATTCTCTCAGCTC  
ATAAAAAAGTCTCCTCTTCATTTGACTATGCCTCAAATCTACTGCTTCTTGGATTATTAAACACTCTTT  
TCTTCCAGGATCTTAAATCTCTCTGTTATAAGTTGAATTGTGTCCCCCTCAAAAATGATATGTTGAGGT  
CTTAAACCCAGCTTATAACATATTTGTAATGCTAAAGGACTGCTCCACAGGGAGGTTACAAAGAGAA  
ACAAGGCCACTAGGGTTGGCCAGTCTTTTATAAGGAATCCAGTATGACTGGTGTCTTATTAAAGGG  
AAAAATTTGGACAGACACACACATAGGGAGAAAGACGTGATGATGAAGGCAGAGTGGGGGGTGTGCTT  
CTATAAGCCAACGAACCCCAAGATTGCCAGCAACCCCAAGAGCTACAGAGAGCATGCAACAGATTT  
TCTATCAGCAGCCTCAAAACAGAACCAACCCCTGCCAATGCTTTGATTTTGGACTTTAGCCCTTGAACCTG  
TGAGACAATACATTTTGTATGTTTAAAGCCACCCACTTTGCCGTGCTTTGTTCCAGCAACCTTGGGAAATG  
ATTACACTTTCTCATCTGTGATCACAGTGAGGCCTTGTCACAATCTTCACTCATCTCTCTATAGAAAGC  
TGAAAGCCTATGGACAAGGATAATGCTTGGCTGACGCATATGTTTGAAGGCAGCTGCTGGCAGGCAAC  
CGGAGACTTTTACCCTGGTCTTAGTGAGAGGAAGCTATAGGAGGAGGAGGAGCCTTCTGGCTGGCA  
ACCCAGTGACTCAGGTTGTTTTCTTACTCCAAGGATCTCTGTGCAAGTAGGAATCCTGACATCTCTCTT  
TTTCACTTGTATGAGACCTGCTTGTGTAGAGTAAAGAGCAGAACTTAAGAATGGAATCTAATCACC  
TTGAAAGAATAATCTCTCATCTCCTCTGGTGGCAAGGATGGGATGTGGAGGTTATAGTTGGAAATG  
ATTCTAGGTCAATGCTGTGGGTGAATTTCTCTTTGAATTGTTATCAGCAATGTTATGGTGTTCGGTGG  
CTTTCAACGAAATAACACACCTGACATCCTTAGTAAAGAGAAAGCTTTCTGAAATAAGAGTGAGGGACA  
GACTGGGACATGATGCTTTGCATGAATAGGTGTTCAAGTAAGTATTTGTAGAGTTGGAAGAAGTTAGATT  
AAACAGGGCTATTGTATGGCACATTTGCTATTAGGGAGTTAGAGAGGGCTTCTGGAAGGTTTGGTCAGTT  
TTGATTACCTTGCAATAAATTTGGACTATAATAACCAATTCAGTATTGTAAGAGGTTACTGGCAACCA  
AAGATGGGGAATGCCACTCAATCTCACTTGTCTACTTTTCAAAAGCTTGTCTTGGTCACATTGAAGGTT  
CCATTTTGGTGAAGTATAGCATATCAGAGAAACAAATGGAGTTTGGGAGTTCGGGAACAAATGGTTGTTTT  
GTGATAATGAATAACTTTGACATTTCTGTTTGAAGTTAAGTTATGTTGTTTGAACCTTTCTGTCCCTGAAC  
AAGGCATCGTATGCCAAGAACAGGTAACAGTTTCTGGATCACTGGGACTCATTAGTCATGGATGGTTAG  
TGGTACTACATTGTGGTCTTCTCTCAATATTGAAAGCTGTAAGAGCTTGTGACAAATCTTACCTTTGGC  
CCTCACACAGTACTGGTAGGGCTGGGATGTTATTGCTTTTGTCCACCAACTTCCAACGTAGAGTCTAG  
GATGATCACAGCAGTTAGAGATGATCCATTAGATAGTCTATATTAAGGGAAAGTATCCTTCATCCATGG  
TGTTGAAACATTCGTAGGATTAAAAAGAAAGGCCAAACCTTTCTAGATCTTTATTGGTATATCAACAG  
AATTAGCTGATTAGGTATGCAGAAAAAATTTGGGACTTGAAGACACCATTAATAAATAAATCACTGACATA  
CCATACATTAATAAATCTGTAACACCATTTATATAAATAACTAATAAATAAGAGCTCTACATTCAAAC  
TGCTTTTCACTGCATTTGTGAGATTTCATTTTAAATATAATTTTAGTTGACTTATCCCTCATCTTACCTT  
AAGAAGATAATGAGTTGAGGTGGATCTTGAGCCAGTGTGTTAGTCCAATATAGCCCTTTGACTTGGGGAAA  
GATCAAACCTCGAAATTTATATGCATGACTCCTCTCTGGGCAAGGACTGAAGTGGCAGGAGAGGTGAAG  
AAGGAATCAGGACAAAAAGTAGATGCTAAAGGAAACAGTCTGTCCCGTGGAGAGGAAGTACCCAAAGA  
AACAGAAGAACTCCATGATGGAGAGTAATCAAGTTGAATATCCCTTATCCAAATGCTTGCAGCAGAT  
TGTTTTGGCTTTGGGATTATTTGAGATTGGAATATTTTATACCCGCTCAGTATCCCTAATCTGAAAA  
TCCAAATCTGAAATGCTTCAGTGAGCATTTCTTTTCACTGTCTCTTGGCCCTCAAAAAGTTTGGATT  
TTGGAGCATTTTGAATTTTGGATTGTTGATTAGGGATACTCAACCTGTACTAGCGTGTAAAAACAGTCC  
TGGCCAGGCGCGGTGGCTGACACCTGTAATCCAGCACTTTGGGAAGCGGAAGCGGGCGGATCACAAGAT  
CAGAAGATCGAGACCATCTGGCTAACACGGTGAACCCCTGTCTCTACTAAAAATACAAAAAATAGCT  
GTGCCGTGGCGGGCGCTGTAGTCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCGGGA  
GGCGGAGCTTGCACTGAGCCGAGATCGCGCCACTGCACCTCCAGCCTGGGTGACAAATCGAGACTCCGTCT  
CAAAAAAATAAATAAATCCAAAAACCCAAACAGTCTAGAGGCTACAGCCTAGAGCAGTGGGCAAA  
GAGAAGCAGAACTACAGAAATATTTGTTCAAGGCTGCTATGCTAGGTCTCAGATAGCACCAGAACTGG  
GCAGGGCAAGAAACGTCAGGCCAGGGGTCTGGTTAAACCAGAAAGAGGTGCTGAATTTTAGGATCTGAAT  
AGCAAGGGTTGTGGTCAGGAAGTCAGTTTCTATGTAAGAATGAAGGTGAGCGGATCTTAAATCCCTGAAG  
GAGGCAGAGAGAAGAAATATAGGAATGGGTGGATAATTTTGTGCGAGTAAAAATGTTCAAGACTTTGG  
AGGCAGGAAGAGCAGGTAAAGCAAGTTCAGGAAAGAGGCTGGGTGAGAGGGATCTGAAAGCAGGAGTC  
AGAAACATCCATTGGAGGCCTGGAGAACATAAATGGGAGGTGAATAGACTGGGGACATAGTGCCTGGGTG  
GAAAGAGCTGGCTCGAGTCCGAAACCACAGGCTGAAATATTAGGAAAAAGAGACCCAGGAATTCAGTTC  
AGAATAGGAGGGATTGTGGGGCAAGACAGTGGTTCTTCCAGACATTTTATCAGAGATAACAAAGCAGA  
GGCTGTCTGTCTCTGCCCCTTGGTGTGAGAAGAAAGGACTGACAGGAGTGTCTGGCAGCTCAAGCCAG  
TATGGAGCTGTGGGTGCTAGTGGCTATTAACTACCAGGGAATAGTCTGCTGAATGAGTCTCACGCAG  
AGGCAGGGATAGAAGCTTGCAATTCAGAAGACTGGCCACGAGGCGGGCTGGGTGGCTCACGCCTGTAAT  
CCCAGCACTTTGGGAGACCAAGGCAGGAGGATCATCTGAGGTGAGGAGTTCGAGATCAGCCTGGTCAACA  
TGGTGAACCATGCTCTACTAAAAATACAAAAATTAGCCAGGCTTGGTGGCGGGTGCCTGTAATCCCAA

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GCCACTGCACTCCAGCCTGGGCAACAAAGAGTGAAACTCCGTCTTAAAAAAGGAAAAAGAAAA  
GAAAAGAAGAGTGGCCACAGATTGGCTTGGCTGGAGAAGGCATTTTTTTATAGGGAGATATACGTGAGTT  
TGACGGGATGGGCTAGCAGGCGGACATTCAGGTTTTATGGGATAGGCAAAAAGGTACAAATGGTATTTGG  
GGGGATGTGAATGGCATCTGAGAAAGGTTGATCCAGGCTTGTGTGGAAGCTGGCTCTGAGCATAAAATGC  
CAGAGAAAAGGCTTGTACAACCTGAGGCTCTTTCTTTCTTTCTTTCTTTTGTGAGACAGAGT  
CTTGCTCTTGTGCGCCAGCCTAGAGTGTAGTAGTGTGATCTCGGCTCACTGCAACCTCTGCTCCCTGGT  
TCAAGCGATTCTCTGCTCACCCTCCTGATTACCTGGGATTACAGGCACCTGCCACCAAGCCTGGCTAA  
TTTTTGTATTTTTAGTAGAGACACGGTTTTACCATTGTTGCCAGGGTGGTCTTGAATTCCTGACCTCAA  
GTGATCTGCCACCTCAGCCTCCCAAAGTGCTGAGATTACAGGTGTGAGCCACCGCACCTGGCCTATTTT  
CTATTTTTTAACCAAGTCCCAAGTAAGGGTATTTGGTTAGGGTTGAGGCAATGGAATCTGAAAGAAAGGT  
GAGTTAGGTATTTCACTGGACACATGTGGAGAATGTTGGTGATTTAATGCAGAGGGAATTTGGTTAAAA  
AGGTTAATGTAAGAAGGTCATGTGGGAGCTGGAATCACAATAGAGAAACAGAGGCCAGAATGCTGAAC  
TCATAGGAAGTGGGTGACCATTGGGTGATTAATGTACAATAGGGCTGGGTATAGTGGCTCATGCCTGTA  
ATCCTAGCACTTTGGGGGACTGAGGCAGTTGGATCACCCTGAGGTGAGGAGTTCGAGACCAGCGTGGCCAA  
CATGGGGAAATCCCAACCTACTAAAAATACAAAATTAGCCGGGCACGGTGGTGCATGCCTGTAACCCC  
AGCTACGTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAGAGGGTGCAGTGAGCCGAGACT  
CGCCACTGCATTCAGCCTGGGGAACAAGAGCGAAACTCTGTCTCAAAAATAAATAAATAAATAA  
AAATAAAAAATTAATGTACAATAGAGTGTGTAAAACAGGAAATCTACATCTTGACACTTAACCTACC  
AAGACGCAATTGGTTCCTCGTCTGATTTTTAAAGAAGGTTCCACTTCTTCGGAAAAATCACGACAGTCC  
TTGTTCTCAATTTCTTTGTTTTTAAAGAAGAGAAATGTTGTATGATTTCACTTATATAAACTACCTAGAAT  
AGGCAAAATCACAGGGATGAAAGGTGGAATGGAGGTGACCAAAGGTGGAAGGAAGGAGGATTGTTCAA  
TGGGTACAACATTTCTGTTTTGGGATGATGAAGAAATTTCTGGAGATGGACAATGGTGATGGCTGCACAACA  
CTGGGAATGTGCTTAATGCCATTACTTAAAAATGGCTAAAAATCATGCATTTTATGTTATGTATATTTAC  
AACTTTTTTTTTTTTTTTGAGACAGTGTCTTGTCTGTCTATCCAGGCTGGATGGCGGTGGCATGATCTC  
GGCTCATTGCAACCTCCACCTCCAGGTTCTAGCAATGCTCCTGCCTCAGCCTCCCCAGTAGCTGGGATT  
ACAGGTGTGTGCCACCATCCTGGCTTAATTTTGTATTTTGTAGTAGAGATGGGGTTTTGCCATGTTGGCC  
AGGCTGGTCTCGAATCCTAACCTCAAGTGATCTGCCACCTCAGCCTCCCAAAGTGCTGGGATTACAGG  
TGTGAGCCACCATACCTGCCATATTTACAACCTTTTAAATCATAGGAAAGAAACCACTAATGCTTTGACAA  
CTGTGAGATTTTGAATCTCAACTGTGAGATTATGGTTTGTGGAATTTCTTTATGTGATTAAAAAGATA  
CTTTTTTTGCCAAAAATTTGTTTTCTGCTGTCTGATGCAAGTTCTCCTGGGTAAGCACCTTTGGTCTTGTTT  
TGTGCATAGCATACAGAGCAGCAATGTATATTGCTAAAGAAAGCCTGTTTTTTTTTTCTTGTATTTTA  
TTTAAGTTCCTTGTAGATTCTGGATATTACCTTTTGTGATGGATGGATTACAAAATTTTTCTCCCATT  
CTGTAGGTGCTCTGCTCACTCTGATGATAGTTTCTTTTGTCTGTGAGAAGCTCTTTAGTTTAATTAGATC  
CCATTTGTCAATTTTGGCTTTTGGCTTTTGTGCTTTTGTGTTTTAGTCATGAAGTCTTTGCCATGCTTA  
TGTCTGAATGGTATTGCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTAGGTCTTATGTTTAAATCTTT  
AATCTGCTTGAAGTAAATTTTTGTATAAGGTATAAGGAAGGGTCCAGTTTCAGTTTTCTGCATATGGCT  
AGCCAGTTTTCCCAATACCATTATTAACCGGGGAATCCTTTCCCATAGGATATGAACAGACACTTTT  
CAAAAGAAAGACATTTAGCAGCAACCAACCAATATGAAAAAACCTCATTATCACTGGTCATTAGAGAAAT  
GAAAATCAAAACCACATAGATACTATCTCACACTAGTCAGAATGGTGTATTATTAAGTAAGTAAGTAAT  
AACAGGTACTGGTGAAGTTGCAGAGAAATAGGAACACATATACGTGTTGGTGGGAGTGTAATTAATTTCAA  
CCATTGTGGAAGACAGTGTGGCGATTCTCAAGGATCTAGAATAGAAATGCTATTTGACCCAGCAATCC  
CATTACTGCTAGCTATATACCAAGGATATATAATCATTCTACTATAAGACACATGACACAGTATGTTAT  
TGCAGCACTATTACAAATAGCAAAGACTTGAACCAACCCAAATGTCCATCAATGTTTGACCGAATAAAG  
AAAATGTGGCGCGTGAAACCCGGGAGCGGAGCTTGCAGTGAGCCGAGATCCCGCCACTGCACCTCACCCCT  
GGGCGACAGAGCGAGACTCCGTCTCAAAAAAAGGAAATGTGGCAGATATACACCAT  
TAAAGATATGCAAGTATAGGAGAAATATGAGTTTATGTCCTTTGCAAGGACATGGATGAAGCTGGAAAC  
ATCATTCTCAGCAAACTAACACAGAAACAGAAACCAAACTGCATGTTCTCACTCACAAGTGGGTGAG  
TTCCATAATGAGTGGGTGAGTTCCACAAGTTCCACAAGTTTCAACAAGTGGGTGAGTTCCACAAGTTCTAT  
AATGAGAACATATTTGCACAGGGAGGGGAACATCACACACAGGGCCTGTGCGGGGGTGGGGGTCAAGG  
GGAAGATAGCATATTAGGAGAAATATCTAATGTAGATGACGAGTTGATGGGTGACGAACACCATGACA  
CATGTATACCTATGTAACGAACCTGCACATTCTGCACATGTATCCAGAACTTAAGGTATAATAAAAAAG  
AAAAAGAAAAAGAAAAAAACCTGCCTTTTGGCTTTGGCAGTCATCATCTCTCATGTTTTT  
CTTATTTAATCAGTAGTTCTCAATTGACAGCAGCAAAAGAAATTAATCAGGAGAGTTCAAAAAACACCTAT  
GGCTGACTCCCCCAAGATTCTGATTCTCTTGGTGTGGGGTAGCCTGGGCATGAATATTATTTAAAAACTC  
CTCTCATGATTCTAAGGTGGTAGCCAGGATTGAAAAATGCTGGACTTTCAAGTTTTTGTCTTTCTTTT  
TCTTCCAAAAAGGTGAAGCCCTGACTTGGGAAGAATTCAAATGCGAGTTAGGCTTATGTTGATGTCACT  
GATTCTTAAAGATCAGTCCATTGATTCTCTCTCATTCTCAGGAGAGCATTGTTGTGTCAAAATCACAGCCA  
AACTCTTACCCTAGTTTCAAGCATCTAAGCTCTCTCAGTCTGAACTGTTTTTGTCACTCTGTCCATATA  
ATCACAGTGTGTAGAAATTTCCAGCTAAACATTTGTCTCAAACTTTTTGTACCTAGTTTTAAATCAAAAT  
GTAGTACAAAATATTAATACAAACGGGCTTTAAATATTTGAGATTTTGGTGATCTTTTTTGTAGAAATGC  
AAATACTAATGAACTAATTTTTCTTTTGGCTTTCAAACTATACATTTCTTCAAACTCTTTTCAAAAT  
AGAATTTCTAAGTGAAGAACCCCTGAAGATTATTTTAAAGAAATTTTAAATTTTAAATTTTAAATTTTAA  
CTGAGACTCAAAATATATTAATTAATTTATCTAAGTGTCTTAGTCCATTTTGTGCTGTATATAAGAGAGCAT  
ACTTGAGACTGGGTAAATTTATATTGAACAGAAATTTATGGCTCACGATTCTGGAGGTTGGAAAGTCTGA  
TATCAAGGTGCTGGCATCTGGCAAGGGCCTTCTGGATGTGTCTACATGGTGGAGGCGGAAGGGCCAGA  
GGTAAATGTGGCTGAATTTGTGCTTCTATTATGGCATGAATCCCATGAAGTGGAGGCTCATGG  
CCTAATCATTTCTCAGAGCACCACCTTTTAACTACTGTTACAATGGCAATTACATTTCAACATGAGCTTT  
GGAGGAGACAAAAATTCAAACCATAGCACTGAAGTTATACAACCTAGTTAAGAGAGAGAACCTGAGACTG  
AAACCTGATGTTTTGACTCCCAATCCAGAATGTTGTATCCCTACATCCCAACCGCTTCGTGTTTCCAT  
TCCTTCTCCTGTTTTCTATCTATTTTCACTAAGAGGGAAGATATTTGCTAACTGCTACACACCCAAAT

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GTATACCAGGCAGGTGAGATGACTCTAACATTTTATTTAATGAGGCAGAAATAAATATCTTCTACTAA  
ACAGTGACAAGTGTGTTTTGTTTTAAAAAAGTATTGTGCACAAAAAAGTACTTTTACGATAGGCTA  
TATTTTACAAAAATAATTTACAGTGGGAACACAGAGCTATTTAGAGTGTCTGGTATAAATGATTTTAT  
GTTACTCTGCTTTTTGAAAAAGAGTGTGTGAAGCAGAGGTAAGTAGTACTGAGGAAATAAATACTAA  
ATACTAAGGACGAGATGCACATGGGAAAAGTCTTCTTAACTGTAACGTTGGTGGAGAAATGTATGTTCT  
AGACAGGTCAATGGAATTAGAAAAAGTGGGATCTTGGATTGTTGAGTTCAAATCCTTAGTTTTAA  
ACTGAAGACTTCAAATTTGATTGACTACAGATCAATCAACAACCTGTTGGAGTTGGAACCTGAATCTG  
ATTCTCCATCCTTGTGTTGGGATATGAAAAAAGGAGACATTTAAGAGTATTTTTTATTTATGAACTA  
ATGTATCATCATGTAAAAATATGAAATAGAAAGTGTAAAAATTATAAGAAACAAGAATGTGTTTTAT  
AATCTCATTTTCTTACTTTACGTAAGATGGTAAGTCTATTTTGGAAATTAATGTTTTTAAGAATAGTATT  
ATAATTTCAATGTAGATAAAGATTTATTTAACCCCTTCCCTTTTAAACAGTGTGTTGGGTTTTTAAGTTT  
GCTTCCAAGTTTTCGGTAAATGATGCTTCAATGGATATCTCTGTTTGTATCTTAGTATGTATCTTAGAT  
TAATTCCTCAAGATAAATATTTAAAGGTATGGTATATGTAATATCTTGATACATACTTCCATATTTCCC  
TCCAGAAATGTGTGCACCTATTTAAATGTGTGTGGAGGTGCACATTTTAACTTCCCTCATTATCTGGCT  
GCCCTTCTATAAATCAAGCTACCCCTGGTATTATGGCTCTCCTCCAGAAATCTAATCAATTTAAACACATGAA  
GTGAATGTGTGAATGGACAATTAAGTGTGCGCAAAATGTGGAAAAATGTTAAGTGTAAATCAAAGGCAAC  
TGAAACGTTAAATACACCTTCCATTCTCCGCCACATCCATGCTCTTCCCATACTCCACATCTGCTCAC  
TAAATTTGGAATAAACTGTAATGAACCAGAAATGTCTGACTTACTGGTGTGTTAGGTGAGTTTTATTG  
AAACACTGACTGACCCCAACCTCTAATACCATCACCTTAATGTTGTATCTTAGATTAAATCCCTCAAGA  
TAAATATTTAAACGTATGGTATATGTAATATTTATGATACATACTTCCATAGTTCCAGCAACCACTTGT  
ATCCTGTGTCCCCCAAGGACACTGCAATGACTGTGCACAGTGACTGTGTCTCGGTTGAGGAGCAAGTGGTG  
GCTGAAATCCAGCCCAAGTCAAGTCCCCAAACCAACCACTTTTACACAGTGTCTATGTGTAAGTGGT  
TTGCTTTGGGAGATTTGATCCCATAGGGATCAGCACCAGCCCTGTGTCTATCTCTTCTTCTCTGGGG  
AGATGTTGGCTATTTTGTCTAGCTGGAGAAGGGCACGCAATTTGTTGTGAGGAGACAGGTTCTTAAGTTCC  
ATTGGTACATGAGGGCAAGACAGGAGGGAATCTGTCACTGTACAGGCACCTTCAAGCCCAAGGTA  
TAGACGATAATTGAATGGATTGATTTTATAGTAGTCTAATACAGAGTGGTGTACAACTCTCTGTATGTG  
CCTATTTAGAAATAACTTTCATATTTTAACTTCTCACTTTACATAAAAGATATGTGTATAAATACACCTT  
TTATTTTAGAACAGTTTTAGATTTTATAGATTTAAATTTGGGAAGACAGTAGAGATTTCTATCTAACCCACA  
CCCAGCTCCCGTATTAGTAACATAACATCTTGCATTAGTATGGTATATTACAATTAATGAACCAATACGT  
TATTTTATTATTAACCTAATTCATGCTTTATTTCCAGTTCCCTTAGTTTCTACCAATGTCCGTTTTCTAT  
TCCAGTATCCCATCCAGAAATACCAATACATTTCTGTTGCCATGAGTTTCTAGATTTTCCATGTTTTTG  
ATGACCTTGACAGTTTTGAGGAATACTGGTCAAGCGTTTTGTAGAATGTACCTCAACTGAGATTTGTCTC  
ATGTTTTTCTCATGATTAACCTGGTATTACAGGTGTTTTGAGAGGAAGACCACAGAAATGAAATGCCATT  
CTTATTACATCATATCAAGCATATATTCTAACAATATGATTTATGACAACATAATGTTGACCTTGGCCAAC  
TGGCTGGGGTAGTATTTGTCTAGTTTTCTCCTCTGTAAAGTCCCTTCCCTTCCACACTGTACTC  
TTTGAAGGAAGTCACTCTGCACAGCTCACAATGAAGGAGTGGGAGCTATGCTTCCCTCTTTGAGAGTT  
GTGTATGTACACAAATATTTGGAATTTCTCTGCATGGGAGATTGTCTATTCTCCCTATTTATTTATT  
TATTGAATTTATTTATATCAGTATAGCTTTCATGGATATTTATTTTAGACTTTGGGCTAAAAACAATACTA  
CTTTATTTTATTTGTTTCAATTTGTTCCAGCTTCTAGAAGTTATATTTTATAGAGAAGATATGTTTTTAA  
TATAAAACACTTTAAAAAATGAAGTCAACAGATAAAATATTTTTAAATTTTCTTAAATGGGTGTTCT  
TTGTACCATGTTTCCATCAATAACATTTCTGATTGAAATCTAAAAATTAGTGTGTTGATTTTTAAGTGCTA  
AGATCAGAGAAAAAGTCAAGTTTCCAGACTGAGTTAGGCAACATGTGACTCAGAGTTATAAGGAATA  
CCTTTCCCATCTGCTGACATTTGCAACAGTTTACAGTTACAGAAGTGACTGTAACCTTCCCTCTGGG  
TTCCAGCTGCCAGGACTTACTTTAGTCTTTTAAACATATCCTTCCACCAAGATAAGTTTTTTGAACAG  
TTTCCCATGAGTGTCTCCCCCACCCCACTTGTGCTTTTATTCATGTCTTTATAATATTTATTGGTTG  
GCTGGTGCAATTGACAGGTTGGCAAGTCTGAAATTTGTAGAGCAGGCCAGGCTGGAACTCAGGCA  
GGAGTTAATGCTACATTCTAGGGACATTTTTTCTTCTCTGGAACCTTCACTTTTGTGACAGCTTTT  
CAACTGATTGGGCAAGGCCACCATGTTATGAGGGGGAAGTACAACTAGTTGTCTATTAAAGCCAATC  
AGTCAACTGATGGTTGGTGTCAACCATATCTTCAAGATACCTTCACTACAACATCTAGACTCATGTTGA  
TTAAATAACTGGGTGCCATAACCTTGGCAAGTTGACACCTGAAATTTGGCCATCACAGTGACCAAGACAGA  
AAGTGTAAATGAGTGAAGGAGCAACCCCACTGACAGGACAGTGAAGATGAGCCTGGAGACGGGAGTGGGA  
GGAGTGCTTTGACAGAATGGTCAAGAGAGATGGCATCTGGGTGGAGATATGAAAGATGTAAAGAAAGGG  
AAGGAACAGTTCTGCCAAGAATTTATCTTCTACAATTTCCAGATGATATTGATGCTGTTGCCCTGGA  
GCCATACTTTGAGAACCACAGAGTAAGGTATACCTCTGTTATTTATCAATGAATCCTGAGAAAGCCCA  
TTAATATCTCAGTGACCATTTTTTCTCAAAATTCCTACCTCACATGCTCTGAGGGGCTGGCAGCTTTT  
CTGGGAAGGTAAATCTCAAGAGGGAGGCTTTGAATGATTCCAGGACAAAGTGAAGATAACATACTACCG  
CAGGTAAAGTCTAGGTTTACTTGGAGGTGGCTCAAAACACAAATCCTGTCAATTTTAAATGACACATGAGG  
CCATGACTCTGGGTCGTCACTCTGGGCAAGCCATTGAACCCATTAGAACCTCAGTTTTCCCATCTGTACA  
AAAAGAGGTGATAATGGGTAAAGCAATCCTGGACTGCATTGTGGTAGTGCCATCAAGCAATGAGATTTGTC  
AGGAAGGAAGTGTGATTCAAGTACAGGCACCTTTGTTATCTGATGCCTGTGTGTTGAGTGTGAAGGAGGG  
TTAATTTATCTCTATTCTATGCTCTTTCTATTCTCAAAATTTCTTATGTTGGGAGGAAATCTTGGTGCGG  
TAAAGATCACAGCCACCTGGGGTCAAGCAGAGGACTGTGTCAAGCTTGGTAAGCGTCACCATTCAGGTG  
AGTGGGAAAGAGAGATGAACCCCACTTAAACAGATGACCTCAAGGCCCTGCCCGCCCAACATCTGAGGG  
CTGCCCTGGCTTGTCTGCACAGGGTGTCTCACAGTACTCCTGACTTTGACATAATTTTAACTTAAAGTCAC  
AAGGATGCCCTGGATCACACTGCTGGAGAAGAGATGGTAGTGGGATTTGTTTCCAGGAGACTTTCTGA  
TTCTAGTGGGGCCAGGACCAACCTCCAAATAAGAGGTCTTTGCAACTGCTGCGAGCTCTTGGCACCTC  
TACCCTCTAGCGAGAGGCTGCTCTCCTGCCCAACCCGGTTTCAAGCAGCGTCGAGGGCAGGAACCTCAC  
TGTGCTGGCAAGGTGAGCTGGAGACCTGGCACGGCATAAAGCTTTTTTAACTGACCTTTTTTAAATTTCA  
TCTTCCCTGGACTTAATCTAGAGAGTCAATTGATGAAACAAACATGCCATTTTCTCCGATTTTACGCTTT  
TAAATGTCAACAACAACAACGTTTATATACAAATGTTGCTGAAGGAGACTTTTGGCTTTAGACAAG  
GGTAAAACTGAACCTCTTAGTGTGACTTTGGTTGATTTTTTAAAAATCTGTAATTTGACATATAAGA

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ATTATTAAGACTTTTTTTTTTTTTCTGGTAGGCATTGAATGTGTCTTGAAGAGAAAAAATATGCTC  
AGTTTCAATCTTCTGTCTATGGGTAGCTAGTTATCCAGCCTTAGTTATTGAATAAGGAGTCTTTTCACC  
ATTGCTTATTTTATTTTACTTTTTGAGATGGGGTCTTGTCTGTCAACCCAGGCTGGAGTGCAGTGGCAG  
ATTTTGGCTCAGTGCACCTCCGCTCCAGGTTCAAGCGATTCCCTGCTCAGTCTCCCAAGTAGTTT  
GGATTACACATGTGCACCAACACCTGGCTAATTTTTGTATTTGATAGAGACAGGGTTTCCACCAAGTT  
GGCCAGGCTGGTGGTGAACCTCTGACCTCAGTTGATCCACCCACTTGGCTCCCAAAGTACTGGGATTA  
CAGGCATGAGCCACCGTGCCTGGCTGCATTGCTTATTTTGTCTAGCTTTGTCAAAGATCAGATAGTTGTA  
GGTGTGTGGTCTTATTTCTGGGCTCTCTATTCTGTCCATCAGTCTATGTGTCTGTTTGTGTATCAGTGC  
CATGTTGTTTTGGTTATTGTAGCCCTGTAGTATGGTTTGAAGTTGGATAACATGATGCTTCCAGCTTTGT  
TCTTTTTGCTTAGATTGCTTGGCTATTGGGATCTTTTTTGGTTCCATATGAATTTTAAAAATAGTTTTT  
TTTCTAGTTCTGTGAAGTATGTCACTGGTAGTTTGTAGGAATAGCATTGAATCTATAAGTTGCTTTGAG  
CAGTATGGCCCTTTTATTGATATTGATTCTTCTTATTCATGAGCATGGAATGTTTTTCCATTGTTTGT  
GTCATCTCTGATTATTTGAGCAGGGTTTTGTAGTTCTTCTGTAGAGAATTTACCTGCGGGTGTAGCT  
GTATTCCTAGGTGTTTTATTCTTTTGTGGCAATTGTGAATGGGATTGTGTTCTGATTGGCTCTTTGC  
TTGACTATTTTTGGTGTATAGGAAGGCTAAGTGATTCTGTATGTTGATTTTGTGTCTGAGAGTTTGTG  
GAAGTTGTTTATCAGCTGAAGGAGCTTTTGGGCCAACACTATGGGGTTTTCTAAATATAGGGACATGTCA  
TCTGCAATAGGGATAGTTTGACTACCTCTCTTTCTATTTGGATGTGCTATATTTCTTTCTCTTGCCTGA  
TTGCTCTGGCCAGGACTTCTAATACTATGTTGAATAGGAGTGGTGGAGACGGCATCATTTTCTTGTAACT  
TGGACCCCTTCTTACCCATATATAAAAACTAACTCAAGATGGATTAAAGACTTAAATGAAAAAGCCCAA  
AACTCTAAGAACCCTGGAAGACTACTGAGGCAATACCATCTTAGACATAGGAATGGGCAAAAATTTTCATG  
ATGAAGATGACAAAAGCAATTGCAACAAAAGCAGAAATTGAGAAATGAGATCTAATTATACTAAAGAGCT  
TCTATATAACAAAATAAACTATCAACAGAGTAACACAGACAACCTACAGAAATGGGAGAAAATTTTTGCAAA  
CTATGCTCTAACCACAGGCTACTATGAGCATCTATAAGGAACCTTAAATTTACAAGAAAAAACAACCT  
CATTAAAAAGCAGGCAAGGGCATGAACAGACACTTTTCAACAGAAGACATACATGTGGCCAACAAGCAT  
ATGAAAAAGCTCAGCATCACTGATCATTAGAGAATGCAAAATCAAAACCACAATGAGATACCATCTCAC  
ACCAATCAGAGTGGTTGTTATTAAGAGTCAAAATATAATAGATGCTGGTGAAGTTGCAGAGAAAATGGGA  
ACACTTATATAATTTGGTGGGAGTGAATTTAGTTCAATCATTGTGAAAAACAGTATGATGATTCCTCA  
AAGACCTAAAAATACACTACCATTCAACCTAGCAATTCCATGACTGGGTATATACCCAAATGGATATAA  
ATTGTTCTATCATAACGACACATACATGCATATGTTTATGTCAGCACTATTCACAATAGCAAAGACATGG  
AATCAATCTAAATGCCATTGATGGTAGACTGGATAAAGAAAATGTGGTACATATACATGATAGAATACT  
ATGCAAGCCACCAAAAAGTATGAGATGATGTCCTTTTCAGGAACATGGAAGGAGCTGGAGGCCATTATCT  
TAGCAAACTAATGCAGGAACAGAAAACCTAATACTGCATGTTCTCACTTGTAAAGTGGGAGCTACATGATT  
AGAATTCATGGACACATAGAGAGGAATAACAGACACTGGGCTTATCAGAGGGTGGAGGGTGGAGGAGG  
GAGAGGATCAGGAAAAATACTAATGGGTACTAGGCTTAACTCCCTGGGTGATGAAATAATCTGTACAACA  
AACCCCATGACACAAGTTTACCTATGAAACAAAACCTGCACGTGTACCCTGAACTTAAATAAAGTTA  
AAAAAAAACCCAAAAGGTGAAGTGTGGTGAGGATGTGGAGAAAAGGGAACCCCTATTACACAATTAGT  
GGGAATGTAATTAGTGCAGCCATTTTGGAAAATAGCCAAAGGAAAATTTTTTTATTGAGTCAGATGATGT  
TACCTTTACAGCAATAGCTTCCAAAGGGATGTCTGAATAGTAGAACTTCTCTTTACATTTTCAAACCTC  
TTTTTACTTTCTGATTTTGAAGTTTATGTTTATGTAATGAACATGTATCAATACAATAGCACACTATGTATTTATAA  
ATGAACAAATATGGGAAAAATAAGATATGTTTCACTTTCTGGCTGACCTAGTTAGTCTAAACTATCAGT  
TATAGGATCCATTTGTTCTAATAATGGAAGGCATTGTTGGGGGAGTGGGGAGGGTGAATGATAGACGCA  
AATTCCTTGAAGGAATAGAAATGTGACTACTATGCTGAAAGCAGGACCCATGGAGTATAAATAGAGTAT  
TCACTGCTGTTTACATTTTGTGTTTCCCTGGAGGAAACGTAAAACAAATCTCAAGACTTTCTGGTCAATTTCT  
AAGTCATAAACCGCCACTAGTCACTAATTTATATAACAGCCCAATGTAATATCAAAACGTGTGAGTTTC  
ATTTTCATCTCACAACCTCCTCCCTTTCCAGTTCTGGCCCATACAAGCCGCTGCCTGCAGTGGGATGG  
AGGAAGATGGTTCTTTTCTTCCCTCCCTCCATTTATTTGTCTTTGTGCTCTTAAAGCCAGCCTGAATTT  
CTACTCCCTCAAGGTTGAAGTGGGTGGGTGAGGAGGTGGGAGAGAGTAAGGAACGTTGGCGTGAGTT  
GTTGTTGTGTTTGTGCTGGAAGGTGTTGGGAGCTGCCCCCTCACTCAGGGCTCATTTATGGGCTCT  
TCGGATAACCCCATGCTCTAGCACTGGGATCTTGCCCTGTGGATCCCTCCATGCAGGTGGCACACACC  
CTCTGGCTGGTTGTGATGGGCTTCTCAGCTTTGAGAATTAGCAACACACTTCTTATGAAGTCATCTGT  
CCCTGTGGGTAGCCCACTTTGGGCTGGATGCAAACTGAACCTGCATGATTCTCTCTGATGTGGCCAC  
ATGAGCTCCATTTTCTCCGCAAACTTTGGGTGCAAGCCCAAGACGACACAGACAGCTTTTCTTGGCT  
GCCACCAAGTGGTGGGCCAGAGTTCTCTTATCTTAAGATTTTCAAGTGTCAACACGTCCACCAATTCT  
TGGCAGACATGAATCAACTTCCAAGGGTTTTGGTGAAGCCCTTTCCCTGGGCTGCAGATGAGGGCAG  
CCATGCTCTGTCTTCCACCTGTTGTGGAAGGGTTTATGGCAACATCTCGAACATCCTCTAATTTCT  
CCAATCTTGATCTTTCTGATGCTTGTATGTTGTGAGAGAGAAGAGAGAAGAGAGAAACGCTTCTTGCTGC  
TTTTTTTTTTTTTAAATCCCATGTTGACCTTAGACTTTACTTTGGAATGTGCCATTTAATATCTGGGGA  
CCTCAGCCCAACACAGGACTAAATAGCTCTGTTTTAACATTTTGTATTATACACACATTTTATGACC  
AAATGAACATGTTCCAGCTTTTTTAAACCTTGGCCAGCAATCACTTAATTCAGTTAATAAAAAGACTAA  
AATAATGAGGCCAACCTTATTGGCCACGAACATCTGTTGGGTATTCTTAAATGATCCCTGAGTTAATCT  
CCACCTTTAAGGAGTTTATAATTTTATTTGGCAAAATGATGTTATAATGAAATTCCTGGGCATGAAAAA  
ACCTAATATGTAATGTTGGATAGTGTGAGTTTCCCAAAAGTACAGTATAAGCAATAAATGCTATAAC  
TGATCATGAATTTGATCAGTGATTGAGTAGAATCATTGCATCTGGTCAATGAAATAGAAAGACCTCC  
AGACGGCTGGTCTGCTGCCAGGTGTGCAGTTTATGGGGTCTCCACACTCATTCTATTACATCTTTTGAC  
TTTATCAGCTGTGTGGTGGATCTGTGTTTACAGGCTGATGTGTTTGGCTGTGACCTCGCTCAAATCTCA  
TCTTGAATTTAGCTCCCATAAATCCACGTGTGATGGGAGGATCCAGTCCGAGGTAATGAATCACGG  
GGGCGGGTCTCTCCGCTGCTGTTCTGCTGAATGAATAAGTCTCAGGAGATCTGATGGTTTTATAAATG  
GGAGTTCTCTTTACAGCTCTCTTGCCTGCCGCCATGTAAGAAGCGCCTTTGCTCTCTCTTGTCTTCT  
GCCATGATTGTGAGGCTTTCCAGCCATGTGGAACGTGTGAGTCCATTAAACCTCTTTCTTTATAAATTA  
CCCAGTCTTGGATATGCTTTTATTAGCAGTGTGAAATGGACTAATACATGAGCCACATTGTTACAGAGT  
TTCTGAAGGTCAATTAAGAGAAGTCCATGCTGTGGGCTGAGCTGGGACTCAAGAATCTCAAAGGAGAGCCA

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GTGCAATCAACACGAAGGGCCCATCTTGAACCTCCTAAGGCAGGGCAGAGCTGGGTCTTATGGAGACATGT  
GGCTTTTCAGGTAATCCAGTGAGCACCTGTGTTTTCCTCCTATAATCTTGAGGAATGGATATTGTTCTAT  
ATTTTCAGATAGTATAATAATAAATACCTGGAAAACTGTATGACCCCAACACAGGTAATAATGTCAAA  
AAAAACCTTTTATCTACACAAAGTTAGACAACAAATCAAAATAATCTTATCCGTTTATTTCATTCTCTTCC  
AATACAATCATGTATCATTTAATGATGGGGATGAGTTTGGAGGAAGGTGTTGTTAGGAGATTTTGTCTATG  
GTGCAAAACATCATCAAGTATACTTATGCCAACCTCAGTGGTATAGCCTACTACACATCTAGGCTTGGATA  
GTACAGCCTGTTGCTCCTAGGCTATAAACCTGTACAGCATGTTACTGTCTGAATACTGCGGCAACTATA  
AAATAATGGTAAGTATTTGTATATCTAAACACACTTCAACATAGAAAAGGCAGTGAAAAATATGGTATA  
AGAGATAAAAAATGGTCCACCTGTACAGGCCTTGCAGAAATGGAGCTTGCAGGACTGGAAGTTGCTCT  
GGGAGAGTCAGCGAATGGCTGATGAGTGAATGTGAAGGCCTAGGGCATTATTGTATGCTACTGTAAACTT  
TATAAACACTGTGCACCTAGGATACACTAAATTTATTAATAATTTTCTTTCTTCAATCAATAATAAGTG  
AACATTAGCTTACTGTATTTTCTTTTACTTTTATAAACTTTAATTTTTTTTAGAGATAGGGTCTTGCT  
CTGTTGGCCAGGCTGGAGTGACGTGGCACAATCATAGTTCACTACACATGAACCTCCTAGGCTTAAGCA  
ATCCTCACACCTCAGCCTCCTGGGTAGCTGGTACTGCAGACATACACTACTGCACCCAGCTAATTTTTAA  
ATTTTTTGTAGCGACTGGGTTCTGCTATGTTGACCAGGCTGGTCTTGAACCTCCTGACTCAAGCAATCCTC  
CTGCTCAGCCTCCAGCATGCTGGGATTATAGGTGTGAGCTACTGCACCTTGGCCTAAACTCTAATTTTTT  
AAAACTCTTCTTACTGTTTATAATAACACTTAGTTTGAACACAAACACATTGTACAGCTGTACAAAAA  
TGTTTTCTTTTACATCCTTATTCTATAAGCTTTTTCTGTTTAAAGTTTTTAAAAATGTTTTAGTCTG  
AGTGGGGGCTGTGCACCTAGGATACACTAAATTTTGGGAGGCGGAGGCGGCGAGATCATGAGGTACGGAG  
ATCGAGACCATCCTGGCTAACACGGTGAACCCCTGTCTCTACTAAAAATACAAAAAATTAGCCGGGCAT  
GGTGGTGTGCACCTGCAGTCCAGCTACTCGGGCGGTGAGGCAGGAGAAATGGCATGAACCCAGGAGGCG  
GAGCTTGCAGTGAGCTGAGTTTGCACCACTGCACCTCCAGCCTGGGCGACAGAACGAGACTCTATCTCAAA  
AAAAAAGGAGGCTTTTAAACCTTTTAAAAAATCAAAAGTCAACAGACATGCATTAGCCTAGGCCTAC  
CCAGGTCAGGATCATCAATGTCACCTGTCTTCCCTTCCACATCTTGTCCCACTGGAAAGTCCCTCAGGGA  
CAGTAACACCCCTGGAGCTGTCTCTCTGATAATAATATGGGCTTCTGGAAGACCTCCAGAAGGACC  
TGCTCCTGCTTAATGCTGTTTTACAGGTAATATTTTTTCTAGTAGAAGGAGTACACTAAAAATATGAT  
AAAACTGTAGTAAAGTAAATATATAAATAGTCAATATAGTCAATTTATTATCATATCATTATGACTGT  
ACATAATGTATTGCCAGACTTTTATACAACCTGGTGGCACAATAGGTTTGTCTTACACCAGCATCACCACA  
CACGTGAGTAATGTGTGTGTGTGACATTAGGACAGCTACAATGTCAGGAGGCAATAGGAATTTTTCAG  
CTCCATTATAACCTTACAAGACCCTGTCTATCTGCAGTACAAAACATCATTATGTGGTGCATGACTAT  
ATTTACTGAGGACCAATATGTGCCCAGGCAGTGTGCTAGGGGCTGGAAGTGACCTCGAAGTCTAGTAAA  
AAAACCACAACAGTAAAAAATATGTGTAATTCAAAGTGACATATCCTGTAATAGCTGGTGGCTACCTG  
CTCCCCAGAGAGAAATTAACCTGCTTGTCTAACTTATTAATTTTAAATTCATGTACTTGCATATAAAAA  
ACATATTTTAAACATATTAGGAGAAATAGGATGTCTTCTGTAGTGATAGGCTATTTAATGTTCTCTTAC  
TGTGTTCTAAAAAATCGTGATCGAGTGTGAACAAAATGGGGAAGGGAGGTTAGCATAAACTCTCCTTTG  
ATGTCTATGTGTGGATCAGAAAACCATGAATATGTTAACAACCTGGATTTTCTCTAATATGAAACCAA  
CTCTTTGGCTTCTTTTGCAAAATGTGAAAAGTTAACCATATAATATAAGACCTTTTCTTTCCACTAAACTA  
GGGCACAATCATTTGTTTCTCTTATTGGAGTCCAAATGGGTTTCCATAATCTTCAGATCTAGTAGTTGT  
ATTTACTGATGACATAAATGGAAAGTAAAGTAAAGTAAAGTAAAGTAAAGTAAAGTAAAGTAAAGTAAAGT  
CTCTACTGATAATTTGTATATAAAGGGATCCTAAATTAGACTGTACACACATTGGCCATTGAGTTCCA  
AGCATTTTAGCAATAGATCAAAAGATCTTAATGCCTGATAGTTGAAAGATTACTTCCAAATTTTTTTTAT  
TTTTGTGAAAGCCAAAGTCCTTTTCTCAACATGACAGTCACAATTTGTCAACAAATCTACCCGTTATTTA  
CAAAGGTTTAAATTTGCTAATAATAGATATTTTACTTGGACTATACAAATGTCTCAGTGGGAGCAATAGATGGT  
TTACAATGGGTCTGAAAATGTTGCAAAATAGTCAAAACTGGCATTGCAACAATTCATTTCCAAAAACACAC  
TAGACTCGTGAGTTTTTGGTTTTTAAAGTTTATATAGCTTGCTTCTGGTGTAAACGTTCTCCACACCTAAG  
GTGCCAACATGCATGGCTACTCTTTGTCCCCAGAGAAACATTGCTAATTTGTACCAAAATTTCAATGATGT  
GTCAAGCAAACTGTCTATTTTGGAAATGATAGTAAGCAGCGCTTCAACAACAGCTCTTTATTTCCGTCCAAAA  
CCTTTGGGCCACACAATTCTGACCTTTATCACACTCTCAGTACCTTTTCAATTCATTATTAGCTTGTGCTTC  
TGGGGCCCCGGGAATTTGTCAACTATGGTCAAAATATGGAGCAAAATAGCAAGAAGAACTTGCCTTTCCCT  
ATATCATTTGCATTTAATCTTTGCAACAACCTCTTTGAGGTGGAATTTGCCCAATTTTATAGATTACGCTT  
AAAGACCTTGATTTTGTCCAAAGATCACACAACCACTAGGAGGTATAATGTTCAAAATAAAATGTCTGAAA  
GAGCTGGGTGTGGTGGGTGATGCTGTAAATCCAGCACGTTGGGAGGCTGAGGTGGGGGGATCACCTGAG  
GTCAGGAGTTTGAACACAGCTGGGCAACATGGCGAAACCCGCTCTACTAAAAATACAAAAATTAGCT  
GGGTGTGGTGGTGCATACATGTAATCCAGCTACTTGGGAGACTGAGGCACGAGAATTGAATGAACCTGT  
TGAGGCAGAGGTTGAGTGAGCTGAAATCGCACCCTGCACTCCAGCCAGGCGGAGGCTGAGTGAAGCTCCA  
TCTCAAAAAAATAAAAAAATAAATCTGGAAAGATAGATTACTTGGCCTCAATCATAGTAAAAAAGTGT  
CAGTTAAACTGCATGGAGAGATACTATTTTGAAGAGCATCAAAAGTTCGAAGATCCATCATATTTGTA  
AGGCTATGGGAGTTTAAATTTGTACAGGCGTTATGAAGGCATTTGGTTACATCTACCAAAATTAACACCGC  
ACATATTTACTCATGTGCAAAATGACTTATGTACAAATTTACTAATTTGTAGCATTGTTGATAATTGTAAA  
ATATTAGGAACACACCTAATTTGCCATTAATGGGGAACCTGGTAAATAAATAAGTAAATTTCTCTGTGATGG  
AATACATGAGTCAATCAAAATGACGAAGATGTGGCCGGGTGCGGTGCTCACGCTGTAATCCAGCAC  
TTTGGGAGGCGGAGTGGGCGGATCATGAGGTGAGGAGATCAAAATCATCTGCTGCTAACACAGTGAAACC  
CCATCTCTTCAAAAAATCAAAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATA  
AGTCCAGCTACTCGGGAGGCTGAGGCAGGAGAAATGGCGTGAACCCAGGAGGCGGAGCTGAGTGAAGCT  
GAGATTGGGGCACTGCACGCGAGCTGGGTGACAGAGTGAAGTCCGCTCTCAAAAAAATAAAGAAAA  
CAGAACAAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATA  
TAAAAACAAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATA  
GGAAGAATGT  
ACCTCAGCTGTCTCCAGAGAGGGAATAATGGTGGGTGTCAGGCAGAGGTGAAAGATTTTCCCACTATGAC  
TTTGAATAATCTTTTCAAGTTTAAAGCACCAACTGCATTATATATCAAGAGTAAATAAATAAATAAATA  
AAAAATGAATGGCATTGTAAAAACACTTGATAGATGTTCAAGTAAACAGCCATCAGGATTTATAGTAATT

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GTGGTTTTTGGCCATTAAAAAGTAATTTTAAAAAGTAATGGTTTTTGGCCATTAGTTTTAATGACAAAAACCACA  
 ATTAGTTTTTGCACCAACCACAAATACCTTACGCTTCTGGTGAGGGCTCAGAAGAGAGATCATAAGTAAGAA  
 CACTAGAAAGGATGTTTAAATATTATTTCCCTTTTTTAAACTGGTGGTTGTCAAAGCAGTCTGAAGGAAAA  
 GTCCTCCAGAACTGGTGATCATGTTACATAGCAGTAGTTTGGAGTCAACAGAAATCATCTTCACCATCAA  
 CCTAGCTCCGAAAGAGGCCGAGCCAATCTAGTTCCCTTGGCCAAACCACCTTCCTCCCAACCTATACGTTG  
 GGGTGATCCACTACAAAGCTCTCAAGAGTATACACAATGCTACTACAGTCATTGTGAGTGAGATCTGAAG  
 GGAGCATAGGCTAGGACTCATGAGATTATAGTTCAGAGTTTCTACTGTAATTCCTTTACGCAAGTGAAG  
 AGCATGTCACTGGGGTTACAAGTGTACTGGCTACTTAGCTAGTGTAGATTACCCAAAAAGTAACCGG  
 GTCTCATGGGCAGAGGTGGGAAAGTCTGTTAAGCACATAGTGAAGGATGAATCTGGGCTGATTGGAAAAC  
 ATTTGTTGAATGAATGTAGCATTATTTTCCAAGAATAAGCATGTCCAGACTGATTGAGCAAGAGTTATA  
 TTTAGTTTCAGTCGTTCTGATGTCCATTTTGAGAAAGCTAAACCAGCATGCCAGAAGGGGTCAAAGATCAC  
 ATTTTGCATGAAAGAAAAGCCAATGGAATGGGACTGTTAGACTTAAACTTTTGGGTATTTTACACTAGG  
 ACTTAGAAAGGACTTTTATCTTTTATATTTTCTGTCTCTAGCATTGCAAGTAGCAACAGAGTGAATTT  
 TTGGTATTTGGAATACTCTCTCCTCATTTTTCTCTTTGGGAAAATCATTAGCCTATTTGATTTGACTGCTG  
 TTGAATATGTTCCAGTACATCAAGTCTACCTTCAGGCATTGCTGTGCTTGTATTATACATATGATT  
 AATTGCTTACATAAGAACAATGATGATCCCTGCAGGGGGAGGAGGGATGTGAAGAACAACCTTACTTAGGC  
 ATTCAGGGGCTAACAAGGGATGGTTTGATACAGCTCATTCTGTTTGAATCTTCATGCCTCTTGAGAA  
 AGAAAGGAGCAGAATATGCTTTGCATGGCGCTATGTCCTCCAGGTCCTATGTTTTCTTTTTTGTATTTT  
 ATCAGTTCTCAGTCTGATGATGCTTTCAGTTTAAATAAATTTCCATTTTTTAAATTCAAATACATATA  
 TGAGGTGGGAAAGGAAATTAATCAGATGCATTCCTATAAACTGCAGACTTAAATTAAGACCTTGAGCAAA  
 CTGGCATTTTGTGACTTGAAGATTACAGTGGGTGGGACAGTTGTACATCTGAACTCTGGGTACACTGCC  
 GAAAGCGAGGCTGAGAAGGCTGTGTTGAGGAAGGAGTGTGAGTACTGAGCCTGTTGGAAGGGGAGGCT  
 GAGAGAGATGAGCATACATAAGTGAAGGAGAACACATTGGCTGGCAGGTTGTTTTTTTTCTGCTGGG  
 TTTTGATTAGAATCTGGGTCTCATTAAAGTGACCCATGTTGAATAGAGATTGGATAGGGCTGGCTTGGA  
 AGCCTCAGTGAAGAGATGAATCGACAGCATGATAAGGAAGTAGATGCAAAATTCAGGACAGGAAATGGA  
 GAAGGGCAGGCTGAGAAAGGGAACAAATTTACAATTTGTGCCATTAGCCATTTATTAGAATTTGGTATA  
 AGAATTTCTGCAATTTGTTTCTCTGATTTATGGTACAAAACTACTGACAAGTGTCACTAAAG  
 TGATGCTTTTATTCAATATCAACCAAAAGTTTACACTAAATCTTTTGAGTCTTTGAATGTTTATGTT  
 ATTTCCAATAATCTTCCAGTTCTTTTAAAGGCTGATTTTTAGGAAGGCTAGCCTTTTGTATCACAGA  
 ATAGTTTCCCAATGAGTATGATAGCTTCAATATCTTTCAAATTAGATTCTTTTGAAATTTGAATGTGT  
 CAAATCAAATAAAACAAGTAGGTTTTTGTCTGTTATTTGTTGAAGGTATTATTTGCAAGTTTGTACAA  
 TTTAGCAGATATAGGAAAGGTCTAATTTTTTCTTTAGCTAGAATGTTCAAGTTCAAATTATACAGATATA  
 AGCATGAGACCTAAATGAATCTCTCTGATGAGTAATGAATGGAAGGTAGATTACTCATTCTTCATGT  
 TCAAAAAACAATATGCTCTCTGAACACAGTTGTTTCAATGTTTTTAACTTATGTTCTCAAGCTCTTCCC  
 ATTTCTTTTATGAGTATTGTTGGGAATGTGAAGGCAGTCTGTTGTAGTTTCCAAAGATTAGGCATTTTG  
 AGACTCTAAGAATAGTTTCAATTAAGCCACCAATTAGTCCCTTAATTTTATTTAAGCTGAGCAAGCAAGGCC  
 CACACTAAAAGTCAGAGAATGCGGCATCTACCCAGAGAGGCTGAGGGTGGGATAGAAAGAAGGAGGCAC  
 TCCAAGTTTGAGACACAGATTCTATTCCAGTTCCTCAAGCTGCATGACCTTCAGCAAGTCTCCTGTGTT  
 GTTCAGGACCCAGTTTCTTTTAAAGTGAAGTGAAGAGTTTGGACTCAACAATTATAAAGAAACATTCA  
 TTCTAATTTGCTATTGTGTGAAAGAAATGTGAGTTGTTCTAGAAAATATGAATCTGCTCCCAATTGTCC  
 TCCAAGCTCTGTTCTAAATTTTCAAGTTATTATAGTTACTTCTTTCGAGGTAAATCATTGAGGAAGTCAGT  
 TAATGCAGAGATGATGTCTGGAAGGAGTTTACAAGTTCATTGTTCAAATAGTATTGTTGGGGGCCAACT  
 ACAACTCACATCAGGAGTTGTGCTCAGTTGGACTAGTGTCTTTGGAACACAGAGTCCCTGTGTGCCCT  
 TTTTGAATTTACAGGCCAATTGAGGAGAGAGAGACAAATAGGAAATCCAAAGCATGATAAGTAGTA  
 TAATGAGAAATGTTTAGGAGATACGAGCATTATAGGAGTAGCACTCAATAGGAAATCAAGGAAGGCTTC  
 CTGGTGGCTATGATGTCTCAAGGGAGACTTGAAGCATGATAGGAGTATGTGATGAAAGGGATGGGA  
 GGAAGATTTCAGGTAGGTAATTTGCATACGTGAATTTAGACCAGAGAAAGTCCAGAGGGAGTGGG  
 AACTTAAAGAAATCCAGTATGGGAGGAGCATAGTACCTGTTGGGAGGGTGGGACTCTTGATAAATGA  
 GGATAGTAATTAAGTTCTTTGGCTCTTGAGTTACTTTTGGACAAGTTGAGCTTCAAGTAGCTAGTACAT  
 AGGAGGAGCTTAATAAATATTTATGAATGAATGAACATGAAGTAAATATGCTAATAGGTACCTGGCA  
 AAGTGGACTTCTAGTTCAGGAAGAGAGGTTGTTGGAGATTCTATTTTGAATTTTCAATGTATATAT  
 GAAAGTAAAAACACAAGGAGTGGTTGTGATCATCCAGGAGAAGGTATGCAGAGGAGGGAAGAGGGTCTAG  
 GGGCTGAATCCTGGGGTACCCACACCTGAGAGGAGGAGAGGAAGAGGGGCTCTCAGAAGAGCCTGAGCA  
 GGAAGGGCCATTGTAATAGGACTAAACACTAAGCCCTGAAGTCAGCTCTCTGGGGGCAGAGGTTTTTGT  
 TCTGTTTTATTTTGGGATGCTGCTGTTGACCAGATTATGCTCCCTACCCACCCAAATTCACATATTGAA  
 GCCCTAACACTCAATGTGACTGTATCTGGAGATAGGGTCTTTGGGAGGTAATTTAGGTTAAATGATGTTT  
 TAAGGCTGGGACCTACTCTGATAGGACTGTGGCCTTATAAAAGAGCTCTCTCTTTTCTGTCTCCTC  
 CTCTACCTCCTCCAGGACCCACCCACCCACACTGAGAAAATAAATCGCTGTTGTTAAATCACCCA  
 GTCTATGGTATTTTGTACAGTAGCCTGAGCTGACCAAAACAGTTCTCCGCATTAGAAATGGTCCTGGT  
 AAATACAGCTAATCAATATTTTGTGAGTGAATGAATGAGTCATTCACTGGCATGCTTATAAATG  
 CATTACTCCCTCCACAGTGTGATTGTCTGAGCAGGTTGGGAGAAGGGAGGAGCTCTCGCAACATGGA  
 AGTCTGGGTGCTTAGGGAGAATGGGAAGGTGCCGTGGTCAAAAATCGGAAGAAAGAGCTGAAAGGCTG  
 AAAGGCTGAAAATGCTAACTGCTCAAAATCTCCTCTGCTTTTTTAAAAAAATCATTGGCTAGGCTG  
 GCTCTGAAATTTGGGATGGTTCTTGGTTGATTATGTGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT  
 TAAAGGCCCTTCTTAACATTAGATAGGACTATCTGAATCTAAGTGAATTTAGGCACAATCTAGATATTGC  
 TCTTCATAGAGAAATAACTCTAAGCTGGCAATGAAATTCCTCAAGTAAACAACAGATAAAGGGAAGGA  
 GAGGACACAGTGTAAACAATAATTGGAATAATTGTAATCTGTAATCACTCATGGCACTTACAGTGAAG  
 TACTTTCTACATTGTCTTCTATTACATGCAACATAGGTACATTATATAAAAGATCCTAAATATTGTTA  
 AAAGAAATTTTCCAGAAAATGTAAGATAAAGTTACTAAATCTATTAAGCTGCAAGTTAAATCCAAA  
 TCATTCAATGACTCATAATCAAGAACAGTCATGCTGCCTGACAACCAAAAAATTCAACTGTCTTCATCA  
 AGTCTGGGTGGGAAGCCAGGAAATGGGATCTGAGATCACAGGCTTTGTGAGAGTCAGGGTCTTTGGCGT

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ATTCTTGGTCAACAATATGCATTTTTTCTTGGAGAGATAGTGGGAAAGAAAAGGCTGTTTAAAAAC  
 ATGTTAAAGAATCATGATTCCATTTGACTTCTTGTAAATGTGTACCCTTGCAGACTTGGGTAAAACATTGA  
 CCATTTAAAGACCATGTACTTAAAGATTATGACATAGAGTCTTAGGACAATTTCTGTGCCTTGGGGGT  
 TCCATTGTCAGCAAGAAGAGTCTGACTGAGAGAAGGATAGCTCCGTCCCTTGAATGCCTAGTAACCTGCATG  
 CCCAGCACTTTGCTGGCTGGGCCATTGGTAGGAAATGCGGTACATGCACCTTCAATCTGTAAGAGATCATG  
 GTCCATAGAGATCATAGATTTATTTTGCACCTGGCCCCAGATGGTGATAGAAGTCAGGACAATGGTTGGC  
 TAGAGGGGTGGGAGTTTATTAGAATTGGGACACAAAGGAAATTTCTGGGGTGATGAAATACTCTATAC  
 TTTCAATTGGGATGATTGTTCATGCACATATCCATCTGTCAAATTCATCAAAATGGTATGCTTTAGATACA  
 TGTATTTTCATTGTATATAAATTTTGCTTCAAGAAACAAAACCTCAAGGTCAGGTGAAAAAGTCCAGGAG  
 CTAATCAAAAACCTTTAAAAATAGGTGACCAAACTATTTTGTGAAATAGCAGAGAACTTAAAGGAAATTC  
 TTTGTATTTTCCCATATTAGAGGAAATTTGATGGTATCAGATAAATGCTCAAAAATAAGCTTCCAACA  
 GAGCATTTATAATCAGTACATAATAAGTTTGAACACAGACAACCTTCTGCTCAGATGAAGGAAAC  
 ATTTCTAGTAGTATAAGCTATTACGGAGATAGTTCCACATTTATTTTCTTTCATGTTTCTTTTGGAGGA  
 TAATGTTTTTGTAAATGTAAATGCTTTTAAATGGAGCTAGAGAAGAAGCTATGTTTGGTCATAGTATTA  
 CTGCTTGGCACTAAAAATTCAGGCTCTCTTGTGAATCATGCTGCCAAGAATTCAGACATTAAGCCTTA  
 AGATTGTACGAATTTAAATTTGACTTTTATGGCCTCAGTTGGCATGAAGATACAAAGTAATCTCTTACG  
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 GGTGGATCACCTGTGGTCAGGAGTTCAGGACCAGCCTGGCCCAACATGGTGAAATCCTGTCTCAACTAAAC  
 ATCAAAAAAATAGCTGGGTGGTGGCGGACACCTGTAATCCGACCTACTTAGGAGGGCTGAGGCAGG  
 AGAATCGCTTGAACCCAGGAGGCAGAGTTGCGATGGCCGAGATCACACCTGCTAGCTCCAGCTGGGT  
 GACAAAAGTGAACCTCTGTCTCAAAAAAAAAAAAAAAAAATGGTAGAATGTCACATGGAAGTTAACTTTTAG  
 AGATAGTAATCCAGACACCTATAATATTACTGTTCCCTTTTAAGTATCTATATCAATFAAATTAACCAACA  
 TTTGTTGACTTAACATGGCCAGGACAGTCTGGGTCTCATAAATCCCAAGTAATTTCTAGCCAGACCTT  
 GTCCTCAAGAGCTTATGACGAGATGAGGAGATAAAAAACAGATAAATACTCTAATTCAGGAAGAATT  
 TGATAAATGCATGATAACTACTACTAGAATTCAGAGGAGAGGAAATTTTCTTTGAATGAGACTAAAGGA  
 AGGAATAATGAATGTGGTAGCATTTGGGCTGGACCTATTACAAGAGGCATGCTTCCCTGCACAAGCCAA  
 GAAAGTGGGGATTTAAAGTAGAAGAAAGAAAGGCTTGAGTTCTTGGAGATTAAAAATTTGCTTGGCT  
 GAAAGTATAGTTACAGTCGAGGAGATGAGTACGGAAGGATCGTTATGGGCAGAGAGGAAGCCCTGAAC  
 CATGGGGGAAGCTATGATTTGGGTTAAAGACAGAGCTGGGTCATGCAAGATGGATCCTGAAGCAGTAAA  
 AAAAAATCCAAGAAAGTAAACAGGTTGCAGGGTTAGGATGAAGTCCGGGAGGAAAGGGGCAGAGTGGTCC  
 TTAGGAGGCGGTTAGGACAGGTAAGGTAATGGGTCTCAAGGGAGTGGCCGAAATGCAATGGAAAGAG  
 AGATTGTAAAGCTAGAAGGCTAGGAATTTGCCCTTGTATAGTGTGAAGGCAAGGAAATCAGCCCT  
 CGAAGAACACAGTGAGATTTTAAATCTGGTGGCTGGAGAGACAGTGATGCTGGCACAGACACGGGAAGTT  
 GAGGGAACACCATGTTTGAGAATGGTGACTATATTGAACAGGCTGCAATGCCACAGACACCGGCTGG  
 AAAAGTGGGGCTGGAGACATCTCAACGGAGGAGCCAGATCAATCTTTACCTTCTTCCACTGAGAGAG  
 CAGTAAGTCAAGGCTGGAACGTTGTGTCTCAGCAGGAGAGGTTAGGAGGGAAGCCAAAGAGAGCTGGAG  
 CCCAAGAGTGAAGTTTTTGCCTAAGGACAGAGAGGAAAGTGGCGTAGCACAGTATACTTTCCACCCAT  
 GCTCACCAAGCCCGGAGCAAGGCTACCAAGATGAGTTTGAAGAGAATGCTGGAGAGAAGTGGTTAA  
 GAAACTGCCCTTTACTGAACTCTTGGGCTAACTTTGATTGTAAAGTCTGAAACATCAAGGCTGTGAG  
 GAGACAGCCAACTTCTTATTTCTCTATGTCTAATAGTGAACAAATTGAGATCCCTCTTTCTCTCTCT  
 CCTTTCCCTGTTTCT  
 TATTATTATCTGACATTTTATTTCAATATCTACTATGGAGAGAGCTCTCTCTGCTCAACACCTGCAAT  
 ACTGGGGGTCTTTCAAAGCAGAAAAACATATTTTGCATGATGGCATTAACATTTTATGGCTTTCTT  
 ATTTCTTTTTGTACTGGTCTCAAGAGCCATATAAATCTCTCAGTAAGTGCATAGTGTCCAGGGCCA  
 GAGACCGGCCACTCTGGCATTTGTGATAGTACCTTTAATATCCAAGGTGGTGACTAATGCTCGGCAAC  
 AAAGCTCCATGGGTGCTCATGTGTCTCTGGAGCCTGAGCGTGGGCACTTAGGAGCACCTCAGTATTGC  
 GTGTTAGTACTATGGCCGAGAGAATAGTTGAGAAAGTGGTCAAGAGTGGATGTCATGTGAACGCCACTGG  
 GAAATGAGAGACCTCGTTCCCAATCACGGTCAGTGCAACTCGAAAGCCTAAATCAGTTTAAACAAGG  
 TATCTACCTTTATCTATGTTTCATCTAGGCTTTTAAATAACGATTTTTCATGTTTACAGAAAG  
 CAGTCACTCAGCTATTACATGGAAGGTTTGTGGGTTTGGTTACGAAATGGAGAGTATACATTTTACG  
 CTGGAACACATCCCTAGAATGCCAAAACATTTATTCCAAAGTCTGGTTTCTGGTGCAATTCGAGGCAT  
 GGCAATGCCCTGTGTTAGAGACTGGGGCTAGGGCCAGTAAGGCATTTGATCCACATGTATCCAGAGG  
 CTTTATTGTTTAAATATATTTCTCGGAAACACCCCATGTCCTATTTTGAATTTTGATATCCATAC  
 ACTTTTACTGGCATTTCTATTTTAGCCGTAAAGCATGATTACAGCAAGCCTGTTTCTCTCTCTCTCTCT  
 GGGTGGCAGCAGAAAGCATAGGGTACTTTCCAGCCTCCAAGGGTAGGGGCAAGGGGCTGGGGTTTCTCT  
 TCCCAGTACAGCTTTTCTCTGGCTGTGCCAGTACTGCTCCCTGTGAGCAGACAGCAAGTCTCCCTCACT  
 CCCACTGCCATTCATCCAGCGCTGTGCGAGTAGCCGACCTGCTGCTGGCGGAGGGGCTGCCAAGTGCC  
 CTGCTACTGGCTGCTTCCGAAATCCCTGCCATTCCAGCAGCAAAACATCTCACACATCTCTCTGCTTA  
 GTTCACACACTGAGCCACTCGCACATGCGAGACATTTCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
 TTCTAGAGCCCATTGAACATTTTCTGGAAGAGCTTCTTGATCCAGAGGTTAGGCTGTTTTGATTCTCT  
 CTCTCTGTAGCTTTAGCATTTTGAAGAAGCAATACCTTTCTGGCTAGTGTCTGTATCTCAGGAGGAG  
 ATGAGGATGCTGTTTCTCATGGGGGTATGTGTGTCTCTTTTCTTCCAGGACTGTAGGATCTTTT  
 GTGCCATTTGCATATAAATTTGGCAGGTTACATTTTTTAAAGAGCCCTATGAAGTGCTTTTTGCATGTGTT  
 TTAAGAAAGGATTTGAAATTTGAAAGTGTGATTTAGAAATTAATCATCTGTAAAAAATTGCTTTTGG  
 AGTAATGATTTGCTGCCATAAAGGAAATATCTGCGATGCACCTAATGTGTTTTTAAACCTTTTATTGCT  
 TGACATCTATAGTCATTAATGCTAAACTGATTTTTGGCTTCAGCTACATTTGATATTTTGTGCAACATG  
 GTCTATTTTGTGAAGATTTAGATAAAATGTATACTTGATATAAAATAGTCAAAAATGTAACCTTTAGTAA  
 CAGTAAGCTTTGGCATTTTAGATAGACCATGGAACATCTGTCAGATATCTGTTGGTGTTTGGGATAGCAA  
 TTAAGAACAAAGATTGATAGTTGTATCAGAGTCTATTAGGCTGCAGCAAGGAAGTTTATTCAAAAGTAT  
 AAACATCCAGATTTAGAGCATGATATACCTTACCTATTTTTGTCTGCTTAATATGTATATATATATAT

TATATATATATATATATATATATATATATATATACACATATATGTGTGTGTATGTGCGTGTGCATGTT  
TAACCTTTTAATTCAGTTAAAAACATTTTTTCTATTTGTTTTTTCATCTCGGATATTTGATTTCTGCATATCCTA  
GCTCCCAAGTGAACCGAGAAGATCGAGTTGTAGGACATAAGGATAGACATGCAGAAATGCATTTAAAAATC  
TGTTAGCTGCAGCAGACAGCAATGTAAACATAATTGCCAAAGCTTTGGTTCGTGACCTGAGGTTATGTTT  
GGTATGAAAAGGTCACATTTTATATTAGTTTTCTGAAGTTTGGTTGCATAACCAACCTGTGGAAGGCA  
TGAACACCATATGTGCGCCCTAACCAAAGGTTTTTCTGAATCATCCTTCACATGAGAATTCCTAATGGGAC  
CAAGTACAGCTACTGTGGTCCCAACATAACACAAGTCAGGCTGAGAGAATCTCAGAAGGTTGTGGAAG  
GCTCTACTACTTTGGGAGCATTTTGCAGAGGAAGAACTGAGGTCCTGGCAGGTTGCATTTCTCTGATGG  
CAAAATGCAGCTCTTCTATATGTATACCTGAATCTCCGCCCTTCCCTCAGATGCCCTCTGTCAGT  
TCCCCAGCTGTCTAAATATAGCTGTCTGTGGCTGGCTGCGTATGCAACCGCACACCCCATCTTATCTGCC  
CTATCTCGGTTACAGTGTAGTCTCCCCAGGGTCACTCTATGTACACATACGTATTTCTAGCCACAGG  
GAGGGGGAATCAAAACAGAAAGAGAGACAACAGAGATATATCGGAGTCTGGCACGGGGCACATAAGGCCA  
CACATTAGAGAAAGCCGGCCCTGGATCCGTCTTTCGCGTTTATTTTAAGCCAGTCTTCCCTGGGCCA  
CTTTAGCAGATCCTCGTGCGCCCCCGCCCTGCGCGTGAAACTCAGCCTCTATCCAGCAGCGACGACAA  
GTAAAGTAAAGTTCAGGGAAGCTGCTCTTTGGGATCGCTCAAAATCAGTGTGTCCTGGAGTATGTTTAA  
AGCCATGTGAGGGAAGGCAAGTCCCTGGCGCTCTCCAGCACCTTTGTAATGCATATAGCTCGGG  
AGACCAGTACTTAAAGTTGGAGGGCCGGGAGGCCAGGAGCTGGCGGAGGGCGTTCTGCTCTGGGAGCTGCA  
CTTGCTCCGTGCGGTGCGCGGCTTACCGGACCGCAGGCTCCCGGGGACGGGCGGGGCCAGAGCTCGCG  
TGTCGGCGGGACATGCGCTGCGCTGCCTCTAACCTCGGGCTGTGCTCTTTTCCAGGTGCGCCCGCGGTT  
TCTGAGCTTCTTCCCTCGGGGACAGCGTGTGACCTCGCCCGCGGCACGGACATGACATGACCT  
CCACACCAAAGCATCCGGGATGGCCCTACTGCATCAGATCCAAGGAAACGAGCTGGAGCCCCGTAACCGT  
CCGACGCTCAAGATCCCCCTGGAGCGGCCCTGGGCGAGGTGTACCTGGACAGCAGCAAGCCCGCCGTGT  
ACAACCTACCCCGAGGGCGCCGCTACGAGTTCAACGCCGCGGCCCGCCGACCGCAGCTCTACGTTCA  
GACCGGCTCCCTACGGCCCGGGTCTGAGGCTGCGCGTCTGGCTTCAACGGCTGGGGGTTTCCCC  
CCACTCAACAGCGTGTCTCGAGCCCGTGTATGCTACTGCACCCGCGCGCGCAGCTGTGCGCTTCTCTGC  
AGCCCCACGGCCAGCAGTGCCCTTACTACCTGGAGAACGAGCCACGCGCTACACGGTGTGCGGAGGCCGG  
CCCGCGGGAGATTCTACAGTTACCCGCGCCCGCGCGCGCTCGGGTGGCCCGCGCCCGCAGGAGGTT  
AGGAGGAGGAGGAGGAGGAGGAGGAGCTAGGAGCTCGGGAGCGCGGGACGCGCGACCCGAGGAGGTG  
CGCGCAGGGAGCCCGGGGCGCGCGGCCAGCCCGGGGTTCTGCGTGCAGCCCGCGCTGCGTTCAGAGT  
AAGTTCTCTCGCCGGGCGAGTGAIAAAAGCATCTCCACCCCACTTACCCTCGTGCAGAGGCGACCC  
CGAAAGCCCCGGTTCCTAACAAACACACGTTGGAIAAACACAGCAGCAGTATTTGTGGGGGAA  
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TTGGGGGTGTTTGGAGTTAGCAGAGCTCAGCAGAGTTTATTTATCCTTTTAAATGTTTTGTTTAATGTG  
CTCCCCAAATTTCTTTTCATCTAGATCATTTGATTGGAATATGTTCAGCTATGATGATGATTTCTGGGA  
AGCGATTCCTGTACCCGCTTTCCCTCTCCACCCCACTCTCGGGCTTTAGAGAGCGATTGGGAG  
TTGAATGGGTCTGATTTTCGAGTTTACGTGGCTGAGTCCGCGCTGGAGCGGATGTCTGCGATGTGACATCT  
SACAGCCGGAATTTGTAGGTGTCCCGCAGTTTAAACAAGCCATATGGAAGCACAAGTGCTTAAAAAT  
AATCTCTGCCAGCCAGTGACAAGCCTTCCCAACCGGGGAGAAGTCCCGGAGTGGCGTGGCGGTTGAG  
CCAGGTTCTGCGCTCGCAGCCACTGTGAAGAGGAGCGCGGCCCTCAGGACACAGGAGACCATTTGTG  
ACTTCAATGGCGAAGGTTGTGTCTCTATTTTAAATTTTTTCCCTACAAGAAATGTTCTTCTCCCTCT  
CCTCTCCCTCCCATTTTCTCTTGCCAGTTTCTCTTTTGTTTTTTGTTTTTTGTCTTCTGATGGGCT  
GCAGAGGGATAGTGGGGCGCTTCTGTTGAACACTTCTTAGTGGCCACAGACAGTGTACCCCGGAC  
TGGGTTTGAAGCTTCAGGCGCCACATGGCTGGGCTCTGAATTAGCATTTCCCACTGTACACTGGTA  
TCCGAGTAGTGTCCTATATCTTCTGCTTGTGAAGCGTGACCATGTTTTGTTCAGTATCTGTTTC  
CAGGGATATTTATAGCAGAAGGAAGGGACTAAAGTGCAGTTTGGCCCCAGAGGATACTGAAGGGCAGAT  
TCTGGGGTATTCAGTGTGCATCTTCAGCGCCTTGGAGAAATTTAGAGCATCCACAGCCAGCGAGATC  
CAGCTGTCTTTACTACAAAGACAACAACACTTTTAAAGCTTTTAAAGTTGGCATTTTCAAAATTAATT  
TACTGTTTAAATTTAGGTTTAAACAGAGAAAGAAAGTTTCTCTGCCACCTTTTTTTTAAATGG  
AAGAACAAAGTACAGCGATTAACTCTAATTCACACAACATTTAAAACTGCTTGATGTGAAGGAAGGCAC  
TGGTATGATGTGAATTCATAACCTTATGATGGACTCCAGAAACCATTTTCTTCCCTATTAATTTTTCAG  
TCTTTTATGCAAAATTAATGCTGTCTGAATTTCAATGGGCACTAATGAGACTGCTCCTTGTAGATTAT  
TACTGCTTGTCTAATAATTAACAAGTGAACCTGTGCAATACAGAGGGGATGCATCTTATTCAAAATTTG  
TTCATCATCCAGTGATAAGTGGTATCAGTGAATATGCCCTATCTTACACTTCTGCAATTACATGATAT  
TGAACACACTCTTAGATAATAAAAAAAGAGACAGAAGCACTTAAAAATTAAAAAAAGAACTGCACAAATG  
GGACTCTGTGTGGAATTCAGTTTGAAGATGATTTTCTGTGTTTATTTCCCGGATATATCTTCTCTCT  
TTTGTAGAATTCGCGCTGTATTATCCAGCAAGGAAAGAAAGCATTTATGCAAGTTCTTCATATGACA  
GATATTATTTAGTATTTTCCCTCTCAGTTTTTCTGCTTAAATGACTCTGGGTATAAAGGAAAGGATTG  
ATTGGGCTCTTTTAGGAAACTTTAAGTTTCTTAAGTATGTTCTCAAAGTTTGGGGCTGAAGAGGAGTGT  
TTCAACTGCTGTGATACCCAGAGGGTCATGAACCTGATTTAGTGAGTCTAGATATTTTAAAGG  
ACTAAAAATGGAAAGGAATATAATAGAAAATATCAGAGTGCATGGTATTTCTGAAGGATAAGTTTGTGTT  
CTGAAATCTGTTTTAATTATATGTCCTCTGTGTGCTGATTGTGATGAAAAATGATTTCTTACTGTGG  
ATTGAATTCAGAAAGAAATTTAGAAAGCTAATGGCCCTAAAAATATATGTTTCAGTAGAAAAACAAAAAT  
TCAGGCAAGTGGCTGGTTGTTTTTACCTATACAATCAAAGGCTATTTGATTGCTCTCATTTTCTCCCT  
TATAAATTAGGTTGGTGTCTTTAGTCATTTAGGCTAAGTTTTACTATCTGATCTTAACTTTTCTATTGT  
AGAATGGTGTGTCATGTGAGTGTCTCTCCGAATGTCCCACTGGATGTTTCAGAGAAPTTATGTGAAGGT  
CAGTCAATTTAGCATTTGAGTGTGTTGTTTACCTTTCCATTTCTCCATATATGCACCATCATGT  
GCTGTGAAATATGTAATGATAAAATTTCTGTGACGCATAAATGTGAGAAAGATGTGCATGATGCCC  
AGCAAAATGTTATTAATATAAAATTTGTTTACTGTGCAAGCTGAGATTTTGCAAGATGTTACTCAAATTT  
ACAATGAAGGAAACAGGGAGTCACTTATCTGGGTTCCCTTTTTTAGATTCAACACACTTAGGAACCTT  
GAATAAAACTAAAGATGAAGCTTAACATATAACATACCTTTTAAAGTCTAATTAGGAATTTAATGG  
TGCATGCTTATTTAGTTTTTATTACTCAGTATTTTAAAGTTAGACGCTCTCTCACTTCTCCAAAAAAC

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TGGCAAATGTATAAATCTTTTGCATCAAAATCAATGCCCTGCTAATTTGTATCCTGGCCATCTGCATATT  
 TTGGACAACATAATTTTCCACTGGTGATCATTGAAACTCTTCTCAACTTTGAATAGAGACTGATTTCC  
 AAGTGAGATTTAAGTGACTAAGTTTCAAGTTTCCGATACATTTTCTCTTTACTTAGATAACATTTTCAG  
 CCCCCTTCTCTTCTGATCTTACTTTTTTATTAATTTAAATTTGTTACTGATTACGTGACACTTTGTGCTGG  
 TCTAAGAAATAGTCCAGAGTGCATATTTCCCTGGTGAATGAGCATATTTTCGGATGAAAACGGAATCACAT  
 CTTCATCCCATTTTCAATTTTCCCTCCTCCATGTGGCTTGACCTGTTTGAAGAAAGCTCCTGAAGGA  
 TAATTGCCACTTATTCTAATCTTCTCACACTCAATTAATTTGGATCCCTGGCTAAAGTTGTTATTTACT  
 TTTGTGATTATACTTAGTCTATGACATTCATAATTTGGGAAAATTTCTCAGGTTTGAGAATTTTGGCGGCT  
 TGGGATTCTTTTAGTTTCTTAGTTTAAAGGATATGTAAGACAGGTGTAAGAACTGCCAAGGGGAGG  
 AACCATAGATATCAGGAAAACTAGAAAAGATGCCAGACTTACCATTAAATGAATGATGAGACAATAGTAA  
 CTTTGTAAAGTGAAATGTATATGTGAAAGTGGTATAGAACTAAACAAACATTAGGTGTTTTTATTAT  
 TTACTCACATGTTAATATTTGTTTTGGTGCTTTTCATAGGCTAAAAAGCTGGGAAATAACAGATTTAAGTG  
 GTGAGGAATTTTGTATAAATATAGAAATGATGATTATATGAAATCTTTTCTGTGAAAGTCAAATTTAAG  
 TAAAACTTTTATCACCATCTGCAACATTTGTCTGCAGCCTGGCTTACCAGGTTATCATAAAGAACATTTA  
 TTTTACAGCACTTATAAGAAAAGTCAAAACCTGATTATGTGTAACAAATTTTACATAAGGAAATATATG  
 AATTTTAATTATATTTTCTAAAAATCCGTACTCAGCATGAAATTAATACATCTTAACCCCTCCCTGTGAC  
 TTCAATTATATTTTAAATGTAATTTTGAAGAACCAGTAGAGAGAGCAGCGTGCTAAGTGTGTTTCTTT  
 CTTTTCCAGACAACCTTTGAATGGAGAGGAGCAAAATAGTCTTTTGGTTTAAATCTGTCTCAGTTTGCTTA  
 TCTAAAGAAAGGAAACAGAGTGGCTACACTTGTTTAGAACCATATGCATACTCCAGAGAAAGATGCTCT  
 ATTAATCCAAAAATACAGCCACTTGAACCCAGCCAAAGCGAAAGTGAAGGGACTTCATGGAAGGAGG  
 CAGTTCCACCAAGTTTATGAGGGGTTTTATATTTTAACTCCGCCAGTGAATTGACGTGTAATGTCACAT  
 ACAAAAAAAGGATATGTCTGAGCTGTTTCGCTACTTCGTCTCTAAAAATATACTCATACTGATCTCT  
 GAAATCCAGATTTTAAAGTGGCTGGAGGTTACGGGAAGCCTTTATAATATCTTAACTTAACTCATGAGG  
 AAGAAACCAATAATGCTGAATTTCTCTGCCTTGGATAATATCAGGAGGGACTCTGAAGAAAGTTTGTGAGT  
 AATCAACAAATGTTTAAATATGTGTATATTTTATAGTACCTCAAAAAATATAGGAAGCACAGAATGAC  
 AACTATTCTGGTCTCACTGACACATTTTATGTAGTTTAAATAAGTAAATAATTTCAAGAAACGTTGGGCA  
 AATAAGAAAGATTTTAAAGTGGCTGGAGGTTACGGGAAGCCTTTATAATATCTTAACTTAACTCATGAGG  
 TGATGATGACGATGATGATGAAATGAAGTTTGTCTCAGTTTGGGTAGGTGGTATTTCTGGATGCCCTC  
 CTATGGACCCTGGAGATGTTTCTATATACAGAAATCCAACTTTAAATCTACTTGGCTCATTGTTTTA  
 GAATTTCTAATCCATAGTCTGAAAAATTTAATAATGATATTACCAATAATATTAGAACTTATTAAGTAC  
 CTATAATTGCTATACAAAAATTTAAAGAACCCAAATTTCAAGCAAGACTGAAATTTTGTCTCTC  
 CTCTGAATATTTAGAGGGACAAATAGTTTGTCTTATAATATCTACTTTAAATAAATGTGCCATCTTT  
 AATAAGATAGTAGACTTCTTTGTTGGTAATGTTCTATTTTGGAGATCCTATGAGTTACACTTGGGAA  
 AATTATAAAGTTTCACTTAAAGTTAATAAAATCCATTAAGTAATGTTTCAAGAACTAGACATTTCCAAATGA  
 GCCCTTGAAGATTTTCAAGTGGGTTCTTTTGAAGAGTTCCTCAATGTTTCAACCCAGGAGGAATGGAA  
 GACCTCTGCAGTTTGTATTTCAGATTTCTCATCTCCTTCTCAGAACCCGTAGAACTGGCCGGGCTTAAG  
 GTCCACGCTCCTTGGTTCCAGTTCTGTCTTCCATCCTTCCGTCGCCGGCTCATTTCTGCCCTGTTCTTAAAC  
 GGTGGCAAGTTAGGGGCCCCAGCAGCAACTTGTGCTTACCTGGCACTACTTCTTGGGCAAGTTTCTTTGG  
 CTCTTGAATTTGTTGGGGCTTGGGATTTCTTTATGGCCCTGAAAGCAAAAGACAATGTTCTCTTTTA  
 GTTTCCTGCAATTAATGATGTTAGAAATAGTCATCTTACATTGGCGTACTTCTCTTTCTTCTGTAGG  
 TCTTTTGAATTTTGTAGTCCATTTCTATATTTTCTTGTTCATTGCTTTATTTTCTAATACATAGAAGT  
 TTAAGCTCCCTTTAAAGAGTTTGTGGCTCTTTTACCTATTAAGCTTTCTTTTCTTTCTGTTTTAG  
 TTGTTCCATCTGTGATTTCTCAGATATTTTCTTTCACCTTTTCTGTTTATTTCTTTATTTGACCTGTCT  
 CATCTGTTATTTTAAATGAAATTTGGAACAGGGCTAAACAGAGTTTCTACCTCAGCCAGTATAAGAAATATA  
 CCGTAATAACTCAGAGTGGTATTAAGTATTAAGTTTCAAAAGTGTATGTTTTCTTGTCTCTGAGG  
 ATAGAACTTCAACAAATAAAGAAAGAAATTTCAATTAGTAGAATTTCTTTGAAAGTTGTTTCAATCAT  
 TCAATTTGGCTACCTTATTTCAAAATGAGTCAATTTGAGGGCTTAGACTATATAAGTGTGGTTTTGTT  
 TTCCAGAGTTCATGCAACAGCATTTGCACCTAGCAGCTGGGAAGTCTTATAGCATGAATAGGTGAGATT  
 CTAATACAGAAATCTCTGCATGTGTAACCTAACAGTGTAGTCTTGAAGTGTGTCTCCAGTAAACTTGG  
 TTTCAAGAGTTTATGATCCATGTGAACGTGTACAAGGCATTTTGTCTAAGTGAAGTCTCCCACTTAATCA  
 ACAAAACAAAAACACTCATTTCTGAACATTCAGTGCATTCATGATTAATCTTAATTACACCACAAGGT  
 ATTTTCAATGTGATTTTGGGGAGTGGGGTAACAGTTTCGAAAGCAACATTTGTCAGAAACATAGTTGA  
 TTTTAAAGGTTCTTTCTGGTGACTTTGACTTCTGCTTTTTTGAAGACCTTACACAGAGTTGATTTTATT  
 TCTCCTGGAATATTTCAAGCAATTCAGAGTGAAGGGTATACATTTCAATTTGCGTATGAGATAAAATTT  
 AGTTACATTGAGAAGCTATTTCTTTAGTTACAGGAAAAATTTGAGGGCTTTTGAAGCCCTCTTTGAT  
 TTCTAATAGGAGGAATCCCTGAGCACTGGTCCAAACAGAAATCATCTCTTCTTATTGCTGTATTTCCCT  
 CAAGCTCTTAGCAAAGTGCATGGCAGCTGAAAGCCCGGAGAAGCTGTTGGTTGAAAGAATGGATGGTGGT  
 GGGCAGGAAGCATCAGGACATGGTTTGTCTCAGTCTATTGGCTGGGAGAAAGGCCATTTAGGAAGGGAT  
 CCTTAGATGCCACTGGAAGAATGTGGAAGTTTGTGAATCTCTTTTCTCAGGAACAAAGTAGAAAAAG  
 GACTCCACACAGCATTTCAAGTACAGTCGGCCCTCATTTATTCATGGATTCTGTATTTGCAAAATTCGCTGA  
 CTTACTGACGTTTATTTGTAACCTTCGAGTCAACACTCACGGTGTCTTCTCAGTCTTTTGCAGACGTGTG  
 GAATGGCAAAAAATTTGAGTTATATGACGTATATGTTCCAGCTGAGGCTGAGCAAGGCTCACTTCTCC  
 TTGCAGCCCTCAGACTATAAACAAGTGTCCCTCTTGTCTATCTACTTCTGTGTTATGATTTTTGCATTTTCA  
 TAATCCCTGTTGATGATTTTGTGTTTTAAATGGCCCTAAGCATGGTCTGAAAGTACTGTCTAGGGATT  
 CTAAGACAAGGCTCTGACGTGCTTAAAGAGAAATACGTGTTTGATAAGCTTTATTCAGGCATGAGTTAC  
 AATGCTGTTGGCCATGAGTTCAATGATGGTGAATCAACAGGATATATTAATACAGTGTTTTGAACAGA  
 AAAACATATAAACAAGGTTATGATTAATGAGTTGGCAAAATGCTGTGACCAAGGCTCCAGGAACC  
 TACCCTATTTTCCCTCAATGCAATGGTTTCAGTATTGCTAATTCAGTGTGTTGAGGTGACTTTATAGAAC  
 ATGAGTACCATGAATAATGAGAATCGATTCTGTATAATAGAGTGTGAAAGCACAGGCTCTGGGAGCCAGC  
 AGCTATATTTCTATTCTGGCGTGACTCCTGTGTAGTTGTCTCACTGGCAAAATGCTTAACTGTGTGCTC  
 CAGTTTCTCAATCTGTAAAAGCTACATCGTTTGGATGATGTGAGGATTAAACAAATTCATAGATGTCTAG

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GGCTTATAACATTCCTGGCACATAACAAGTCATTATTTTTATTACTACTTCGGAAGGGAATTGAGTACT  
 ATACCTGAAGAGGTGAGTATGGGAATTCCTACGGGTCTGGAATGTCCTATATTTGTTATTTTGCC  
 TTCAAGTGACTAACTTTAATACCTATTTGTGATTAGAAGTTAACTTCTGCAACCAAGGAAGCAGGAA  
 GCTAGTATTTCTTGAAGTGCTTATTACATGCCAGGTACTGTGCTACAAAACAAAACAAAACAACTGTAA  
 AAAAACTTCAATTTGGCTGCGTGCACTGCTCATGCCCTGTCATCCAGCACTTTGAGGAAGTGAAGGG  
 AGGATTGCTTGAGTCCAGGAGTCCAGACAGCCTGGGCAACACAGTGAGACCTGTCTCTACAAAAAA  
 CAAAAACAAAACAAAGGCCTCCAAATCAGTAAAAATTAATCAATCAATAAAAAGAGTGAGGGGCATTA  
 AGTATTGTGGACTGAAGCAATCCAGAGAGGGAATTAATTGAAGCTGAGGTAAGCAGCTTATGGAGAAGC  
 TATGATGTACAGAGGGCAAGGAAGGAATTTTTCTGTAATTTGGAATAATGGGAAGTGTGAGAAAGAAGGA  
 GTTGAAGCTCATACTAGGGAGCATCTACAAGGACGTCTTTTTCAGCTTGGTGAATATCCAAATCAA  
 GGATTATTTCAGAATCACCAGATGATTAAAAACTACTGAGATCCAGGTGTATTTTCAGCAGTTCTGAC  
 AATTGCTCTGGGTGCAAGCTTGAATCAGTAGTTAAGAAAAACAACAAAACAAAACAAATTTTGGGGCTTTT  
 CTCACTGATTTACAGTTAAAGCTCATTTACTCTTCTCTATGACTTTAGATGGAGGATATTTCCAAGTCTTC  
 AGGATGGAGACATGGAGGGAAGTGAGACTAGTGATGTGCCCTCAAGGTTTGTCTGTTGTTCTAACCATGAG  
 GAGCACTATTCAAACAGGCTGCTAGATTCCAAAGTCTTCATTTCTCTGGGCTCTTGGATTTCAGAA  
 GCAGAGGGTAAAAGGAGTGCTGGGGAGAAAGATCACAGTAGCTTTCAATTTCTACTCCTCAGCTTTCCAAA  
 ATAAGTTTCAAGACTGGCCGTTGCATTTGATATGGAATAAATACAAAGAAGGTAGATTGAAGGGTATGAA  
 GATGCAGATTTTTGATACCAGATATGAAGATAACATTAGGAAGCAATCTAAAACATGGACACAAAACACAC  
 ACCTGTGCCCTCAATTAAGCTCTCCTCGTGTCTCCTCCTCTGACGATTTGCAAAATCCTTTCCACAAATAG  
 AATACTGTTTTTAATGCTTCCCCAGTCCAATTTTTCGCTGTAGAAGACGAATTTATGGATGAGGGAGTG  
 GCATTACAGGCACTCCAGCTTGGTATAGAAGCCCATGGTGTCTGGTCTCAGTCCCAAGCCCCGCTCATTT  
 CCTCATGTGAACCTCAGAATAAGCAGCTGAAAGCAAGTCTTCAAAATCTCAGAGATATGTATAAATGCAAG  
 TGTATTGGGTGCAAGTGAACATGGGTCTCCTCTAGTGCCCACTACTTACTAAGAGGTTTGGGGCTCC  
 ACACAATGAGGGATTATCAACCCCTGTCCAGGGCTCTCTGGGTCTTGGTCTTTGTTTTGATGCTCAG  
 CAATTGTGATCAGTGAACCAATGTTGCTTTTCTATCAAGAGTCCAACCCCTTTCTAAGAAGGGTTGTGT  
 TTGATATTAGGGAATAGCTAGCAAAGTTATCAAGTAACCTGTAGAAACATTTCTTTGCAAGAGTCTTAT  
 ACTGAATGACTGTAGTTGACAGCAGTGCAGTACTGGTCAATTTCTAGGACATCTTAAAAACACTGATGAG  
 AAGTTTCTCTCAGATGCTGTGCATGTCATTTCTGCCTTTCTCTACACAGGGTCAGTTTTCTCTTATTGC  
 TGTAGGAGTTCTCATTTGGTTTTTTCAGCTTTTGGGCTTTCAAACCTCAATTAATCATAGCTACTAGAG  
 TGTACTACCTAAAGTGTATATACACATATATACACACACACACACATATATACCTGGTATACAT  
 ATATATATCAATAGATATATATATATATACCTCCCAACCTGATCTGGTCTTCTCTCTGCATAAAAGAC  
 CTCAGGCCAGTCAGAGAAAACATGTATGTTCCATGGTGTGGCAATCAAGCCCTTGTATTTGGTTCCAATC  
 AGTCTCCTAATATTACTCCAAGAAGCTCTTGTGTAAGAGCCCATGTTTAAATGGCATGTTCCTACTTTCT  
 TTCTTCATAGTGATCTTCATCTGTACCATGTACCCTTCTTCTTCTTGTTCATCTCTGTAGGCTGATT  
 CTACCCAGAAGTCAAGGTTCAGCTCAGTATCCCTATCCCTATCAGGTGAATTTCCACCTGGCATTGTTGCG  
 GTGTGCATTGTGTGCATACAGCACCTTTTCCCGGTACCTTTACTGTAATCACCAGATAATTCCTTTTATT  
 TTAGTTGTAAATAGAGTTGTCTCCCCCTCTATGGAATAGATTTTATTAATGTATAGAGCAGCAGTCCCC  
 AGCCTCTGGACCATGGACTCGTACTGGTTTGGGGCCTGTTAGGAAGTGGGCCGCACAGCAGGAGGTGAGC  
 AGTGGGACATGATGATGCTTTCATCTGTATTTACAGCTGCTCCCATCGCTTGCATATGCGCTGAGCTC  
 CGCCTCCTGTGCAGATCAGCGGTAGCATTAGATTTTATAGGAATGCAACCCCTACTGTGAAGTGTGTATG  
 TGAGGGATCTGGGTTCTTCTTATGAGAACTTAATTCCTGATGATCTGTCAATTTGTCCCATCACCCCGAG  
 ATGGGACTGTCTAGTTGAGGAAAACAAAGTTCAAGGGCTCTCACTGAATCTACATTATGGTGAGTTGCATA  
 ATTATTTCATTATATGTATAGTATAATTAATAGAAATAAAGTGCGCAATAAATGTGATGCAGTGGAA  
 TCATCCCAAAACCATCCCCAGTTCCATCTGTGGAAAAATTTGCTTCCATGAAACCGGTGATGGAAGTGGT  
 GCCAAAAATGTTGGGGACCACTCTTATAAGGCATATTAGAGTAATTTTCATAGATTTCCTAATTCAATTTAT  
 CATATTCAATCTACTCAGCAAGCATTACTGGATGTTGATCATGTACTGGCTTTGGTGGTAGGTGCAGAGAT  
 TGGGAACATTGTCTATCAAGGAGTTTATGGTTGAGTGAGGGAGATGACAAGTGGATGACAATGAAAAAAC  
 AGTAGAATAAGAAGTGTGATAGAAAAGAGACAGCCAGGAGCATTGAGGAGAGGCCTTAACCAGATGGAG  
 GATCTTGGTCCATTGATATGGAGGTCAAATGGTTTAATAGAGCAAGTGACCCCTTCAACTGAATTTTTT  
 AAGAATGAGGATTTAGCCAGACAAAGAAGGGCAGGTGAGGTTGTGAAGAGGAAGTGAAGTGTACTCTTCA  
 GAGCTCCAGCCAGTTCCCTGGACAGAATAAATGCTTACTAATTTATAGAGTGAATATTGAATTAATAA  
 AATAAGGGTAACTGTTAAGAATCAGAGAAATAACTTAAAGAACACTGATAGCTAGTGTTTTTGAACAC  
 CATGTACCCAGGTGCCTTGCCGAAAACCTTAATGATCATCTTGTTTAAACCTTACATTTCTCATAAGAGG  
 CTGGTACTATTGTTATTCTCATTTTATGGGACGTAGAAACTAAGACTTGGAGAGGGGAAGTGAAGTGTCCC  
 AAGGTCATACAACCAAGTACTGGAGAAATAGGGATTCTAGATCTAGAAATTTGGACTCTGGAGCTTAAGGTT  
 TTAACCCACGACATTATGCAGAGAAATGACAGGATTTTTCTGTTGCTGATCAATTTACTTGGCAGTTAG  
 TTTGTTACTTCCCTGTCTTTATTTTAGTTGTGACAATGCTTTCATCTTAGACTGTGCTCCGAGGCTGCTG  
 CTTTATTTTTATGGGAAATGGCTATTTTTATGATCCTTGCTAAAAGCATGTTTAAACATTTTCCATTAT  
 AGTAGGGGATGTTTTTCTTAATATCAGAAGCCAATAAATGAAATTTACAAAGACTTGCTGGTAGC  
 AACCTTAGGAATTTCTTTGCATGTGAAACCCATCTGAGAACTTAAATCTGGGTAAAAATGTAGTGTAAAT  
 TTGGTGCAATCGTCTCTTTGCACAAATAACATCATAAAATCATAGTATTGTCATCTAGGAGGGGCTTAG  
 ACATGATGGAATCCTACCTTTTATATTTCCAGGTGAAGAAATCAAGTCTAGAAAGGTGAAGGAAGTTC  
 CCCCAGTTTCCAGCTGGTAGAGACAGAACAGGGCTAGGTCCTCTATTCTGACTCCTGACCACTACC  
 TCACACCTAATAGATGGAGGCATGCCAGTTCCCTGTTACCGAGGGCATCAGACCATGCCATCTACTG  
 CTACTGTTCCAGCATTTATAGTAGAAGCTCAAGCAAGCAGGATGACAGAATACCTAATTTGCTGCTACTAC  
 AACATTATAATGATGGCTAAAGTGAATGCCCCAGCCATGCTTGTCTAGACAGGCCATCTGTTAATTGGT  
 ATATGGTTCACGTGAGAATTTTAACTCTGTTGTGCGAGTCGGTGTAGTTCTCTAGTGATGAATATT

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TCCTATACTTCCATTTAGATTATTTACTCTTAATTTAATAACCATACATTGTTTACTTTGGTATTGAAGA  
 TTCCTTGTGTTTTCTTCTTTTTTCTGTTTCCAGGGCTTAAAGGTTAGGAGTGACCTTGCCAGACTTCCC  
 TGGAGACTTACACTGTCTCCTTTCAGATTTTGAAGCAGTTGGGTGCTATTTTGTAGTCCACTATCACCAA  
 TGTGAAATGGAACCTTGCAATTATTTTACATATAGATATTTTACATTTAGTATTGACAGAATTAATAAATAA  
 TTTGATCTGTGCTTGATCTAGCAGCCAGGTTACAATAGACATTTTGTAGTTACCTGGTCCACATGTTGAAA  
 AACATGTGCTTCTCTGAGACTAATGACTAAGCCCGATGTTGGTTATATACTGTTTACTATTAAATTTTC  
 CCCTTGTAGTTTAAATTTGTTCCAGGAAATGAAATGAAAGTTTAAATAGAAATGGCAATTGATGGACCCAT  
 ATGTCGGAAGTATAACTAATGTCCCGTTACATGTGTTAAAGAAAGGCATGGCTGGTGGGTTGTAACGT  
 ACTACACCAAGATGATTTGACACAACCTTATTTACAGAGATATATATTTATCAGGATAGAATTTATAACT  
 AAACAAACATAGCATTTTTCACCTTGATTTTAAATGAGTCAAAGAACTGCTAGAATTGTCAGT  
 TAAAAATTTTAAAGAGGAGATATGAAAAATCTTACAATTACAATGCTGTAAAGAGATAATGTAGGGAT  
 TAATATGTTCTTGATATCAATATTTTATGACTTTTATACATGTAGAAGCAAAACAATTTGAGGTAGGTGA  
 AGTTAGTATGGACTTCTTGAGATTGTCCTTCACATTTCTTTTCTTTCGTTGAAAAATTTGAAGGCCAAAA  
 TGTATTTTCTTCTGTTTGTGAAATACTGTCAAGATCCTTGCAACAAATGAGTTCCTCTAAGGAGCTGA  
 AAACAAAGCTCACTCCCTCGTGATAGCTCTGAGAGGCTTTGCTCAGCATCCTGCATTCTGGTGATCCCT  
 GGAGACAGATGATGCTAAACACAGGAAGATTAGGTCAATGGTAACCTTTTCTAAGTCAATATTTCTTCTC  
 CTTGGGAGATGATCATTTTAAATCTTCCCGAAGTCCAGGCTAAACCTTTCTAATTGAATCTCCATGAAGG  
 AGAGCTCCAGCAGGTGGAGAGGAAGTGAGAAAGAGAAATGAAAGCTGCACGCCTCATGACGCTGTGCCAG  
 GGATTTCTTAAAGGTGAGGAGTTTCTTTTGGTAACCTAAGCTATGTGAATCAGAAGGTTTCTAGGCTT  
 GTTCTTTTTCTTTTTTGTAACTCCTACATAATTTTAGTAAACAGGAACAGTAACCTAATGTGATATCC  
 CACTGGCCCAAGACTTGTGATCTTCAAGTTGCTTAATATGTCCGAAACAGACTTTTGTCTCTTGAT  
 GAGAAAAGCATGGTTAAACGTGTGATGATTTCTATTGCTCTGAGCTCAGATCTGTAATTGTGGCCAGAT  
 TCATGCTCTCTGCTGCTTCTCTTGAAGAATCATATGTAGGCTTGCTCAGATAAAACAGGATGCCAGG  
 TAACTGGAATTTTCACTTAAATAACAAATAACATTTTAGCATGTCCCATGCAATATTATACTAAAAATATT  
 ATTTGTTGTTTATCTGAAATTCAAATTTAATTGAATGTCTGTATTTTGTGGTTACATCTGGCAGCCC  
 TAGCCATGCTGCTTTCTGCTTAATGGGCTTAATTTTTGAAGGCTGGAGGTTTTCTGTTATGGTGCCCG  
 TTTCCACCTGCTTTTCTTACCAGGAAGGCATGCTGATGTAGAATTTGCATCCTTATTTTTGTCTATTA  
 TTATTGATTATAACAGATGACATAGGTTTAGATTAAACCTACAATGACATTGCTGTCATTGAGATAATTG  
 TAATTATGCTAATTGTAAAGAGGATAATTTTTTTGAAATGACTATTATTTGTTTTTGTGTTTTGTTTT  
 TTGTTTTCTTTTTTCTAATTATACCTTAAATTTAGGGTACATGTGCACAATGTGCAGGTTTTGTTACA  
 TATGATACATAGTGTGCTGCTTCCAGCACTTATTAACCTATCTTTACATTAGGTATATCTCTTAA  
 TGCTATCCCTCCCCCTACCCCCACCCACGACAGGTCCCGAGTGTGATGTTCCCCACCCTGTGTCCTAA  
 CTGTTCTCATTTGTTCAATTCCACCTTATGAGTGAGAACATGCGGTGTTTTGGTTTTTGTCTTGGGATAG  
 TTTGCTGAGAAATGATGGTTTCCAGCTTCATCCATGTCCCTACAAAGAACATGAACCTATCCTTTTTTATG  
 GCTGCATAGTATTCATGGGTGATATGTGGCCACATTTCTTAATCCAGCTATCATGATGGATGTTTGG  
 GTTGGTTCCAAGTCTTTGTTATTGTGTATAGTGCCACAATAAACATACATGTGCATGTGCTTTTATAGCA  
 GCATGATTTATAATCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATGGTATTTCTAGTTCT  
 AGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAACCTAGTTTACAGTCCCAACAGTGTGA  
 AAGTGTTCCTTTCTTCCACATGTTTCCAGCACCTGTTGTTTCTGACTTTTTAATGATTGCCATTCT  
 AACTGGTGTGAGATGATATCTCATTGTGGTTTTGATTGTCATTTCTCTGATGGCCAGTGATGATGAGCAT  
 TTTTTCATGTGCTGTTGGCTGCATAAATGTCTTCTTTTCAAGTGTCTGTTTCATATCTTCCGCCACT  
 TGTTGATGGGTTGTTGTTTTTTTCTTGTAAATTTGTTTGTAGTTCTTTGTAGATTCTGGATATTAGCCC  
 TTTATACATGATGATGATTGCAAAATTTTCTCCCATTTTGTAGTTGGCTGTTCACTCTGACGGTAGTT  
 TCTTTTGTCTGTGCAGAGCTCTTCTGTTAATTAGATCCCATTTGTCAATTTTGGCTTTTGTGTCATTG  
 CTTTTGGTGCTTTGGACATGAAGTCTTGGCCATACCTATGTCTGAATGGTATTGCCGTTTTCTTCT  
 TAGGGTTTTTATGGTTTTAGGTCTAACATTTAAGAGAAGGATACTTAAAGTATAAGGGAAAAATGTTACA  
 ATGATGAAGGGAACATGAAGAAATAGAATCTGGTAAAAAAGAGTTCTTGCTTTTGGGAGGCCAAGCCCT  
 CCTGGCTAACATGATGAAACCTCATCTCTACTAAAAATAACAAAAATTAGCCGGGCGTGGTGCCACACGC  
 CTGCAGTCCCAGCTGCTTGGGAGGCTGAGGCAGGAGAACCCTTGAACCCAGGAGGTGTAGTTGCAGTG  
 AGCCAAGCTTGCACCACTGCACTCCAGGCTGGGCAACAGAGCGAGACTCCATCTCAAAAAAAGAAAA  
 AAAAAAGATTCTGCTTTCAAACTATGATTAGGTAACCTTTTGTGAATGAGTAAAGTATGAGTATTAT  
 AAAAAATGACACCTTTCTTTTTTGTCTTGGGAAATATCTTATTTTAAATGAGTTTCAGAAAAGATA  
 TTTTCAAGAAATAAATCTCTGAAATGCTTTTTGAAGTGTGAAAGATTTAGAAGACAAAAGCAAACCTCCT  
 GTCTAGATAAAACATTAAGAGATCTGCCCTCCCTCTCTACCTATTACAGTTTGAACACTTTGGGGGTG  
 GCTGCCCTTGGTAGAGCTTGATCGTGACTCTGCTGGCTTGGGAGATGGCATGCTGCACAAGGGATTATGG  
 TTACAGCGGGCTTGTGGGACTGGGGCTCTCCAATACGTGGTTGGGTTTTGTAAAGAAATCAGAGCTATGGT  
 GTGAACAAAAGGATATGCATGGGAGACAGTGAGACAAGGAAATGCTCCAGAAATATTGGAATATAGGTC  
 AGATAACTAAGTACTTGTGCCATTTTCTGGGGGAAATTTCTTGAAGGCTTTTGGGAAAGAAATGGA  
 AGTGAGAAATTCAGGTCCTCAAAATATTTCTTTTACTCAGTCTTAACCTGAGGCCGTTAAAGAATTCC  
 CAGAGTCACGATGGAAGGCATGTTTGGGAGTAAGAGCCAGAGTGAGGGTTAGAAATGTGTTGTGGCCAG  
 GTATGGTGGATCATGCTGTAAATCCAGCACTTTGGGAGGCCAAGGCAGGTGGACCACCTGAGGTGAGGA  
 GTTTGAGACCAGCTGGCCAAAATGGAGAAACCTCGTCTCTACAAAAATAACAAAAATAGCCAAGTGTG  
 GTGACACGTGCTGTAATCGAGCTCTTGGGAGGCTGAGACAGGAGAACTTGGACCCAGGAGGTGGA  
 GGTTGCAGTGAGCCAGATCATGCCACTGCACTCCAGCCTGGGTGGCAGAGCAAGACTCCATCTCAAAAA  
 AAAAAAAGAAAAAAGAAAGAAATGTGTTTCCAGGGTCTGGGTACTTAGGAATTTGGTTGCTTTTGC  
 AGGTGGAAGTGGAGTGACTAGGTAAACAGCTGAGTGATTTTGGCCAGTTGGACATGAGCCAGGTTGAGC  
 AGAAAGCCCTGGGATGCGGGGAGGGGTGGCGGGAAGAAATGAAAGTTGGTTGTGTTGTTGGCTTT  
 GGCTTCATGGCATGCTCACACCTTGCTTCGCATAGCATGCTTAGACTACAGCAGGAGCATCAGGAAGTGG  
 ATTTCTGAGCTCAATACAAAAGTTATAAATACCCTATAAGGGCAATAAGATATATAGTTGATTTTC  
 TTCTTTGCAAGGCCAAATCTTATAGGAACATAAGAGCGAATGAGTTACAGCCTGGGAATTTGAGCCTTAT  
 ATTCAGAGATTTTAGGTTGCTTCTGATTCCGCTGTCTAGACAAAACATGAGAGGATAGTGTCTAGAAAT

FIGURE 1, sheet 38 of 94

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.



GCATTCCCTCCACCGCAGCCTTCCAGAGCAGTGAGATTACAGGTGTGAGCTACCATGCCAGCTAATTGC  
AGGTGATTTCTAATGGGATTTAGTATTTCTGGGTTTAAAGGATGAGATCTGAGGTAATGACTTTGTTTCCA  
GATGTGAAATAATTTGCTCTTGGGTGTGAGCCCTTTGGGTGGGCTCCCAAGGATCCTGCTCTCTTCCAG  
GAGCCCAGGCTCTGGGTCAGACTGCCTGGGTCCCTGACTCCCTGTTTTCTGATTGTACAACCTTTGGTGA  
GTGGCCTAATTCCTCTGTGCCCTGGCTACCTTGGTTACTATTTCTAAACAACCTGGTGTGTAGTAGTAC  
TGCTTAGAGTACTTTCAAGGGTTAAATGAATTAATCCATGTAAACGCTTAAATAGTGCCTGCCACAAC  
CATCAATTTAGTGTGAAATCTGCTCACCTGCTTGGCCAGCCCTTTCACTTTATTAACCAAGGGTCTGT  
GCTGGGTTTTCCAGAAGTCTAAGTTGCGGTCTAATCTTTGTGAGAAGCTGAAATAGCAGCCATAACGTT  
CTCCCTAGATGATTTCTGGAGCTTCTTTGAACTGTATCTATCTCCAGTCATTTTGTGGAAGAAATTTT  
CTTCTGTACTTTTATAGGATGAGAATTACCTGCCTTGGTTTATTAACATAAGACACCATGATTACAAAT  
AAAATTAATAAATATTTGATCACTAAATAGATAAATATGAGATAGATGATTAAGTTTTCAGATAAACAG  
TATAAAGAGCTAGAGTAATTTGTAAGGTTGGGAGGACCTATTTTGTATGCAGGAAACAATTTTTAA  
CTTGCCCTACCCAGAACATAGCTACACATGGTTAGGGTTTGCCCAAACCTGGCCAGGAGTCATTTACC  
TTGAGCTTTCTTAAAGGAGGATCAGGATTTCTCTCCAGACTCTATCATTTTATAGGTAGAGTCTTCT  
TGTCATTTCTTTTAAAGACATACATTTACTTTTGTGGAATAAATAGATACAAAATAAATACATACAA  
AATTGCATAGCAATTAGAAATACCCAGGAGGTATGTTATGGTCACAGACACAACTGCCTCCAACCTCTG  
TCCATCCATAGTGATATTTAAAGCAGAGAGAGGTACACAGTAACACATTTAGATGGACTGGGATGTTG  
CCACACATACAAGCATTGATAACTGGCTTCTCATTACCTGAATACATTCTTCTGTGAGAGCAACAGACTC  
AGCTATGCTTCTTGGCAAAATTTGTTCTTAATCTCTATTGATTAATTTATTCGGTAAGATTTTATGGGTA  
TTTTCTGTCTGAAAAGTGCGATTCCAGGTGCTTTATGTGTCTCTGTGTGGGTGTTATATAAATACTTA  
TAATACGTATCCATACCTCTTGAAGGCTTAGTTGGGAAGGCAAGGCATGCAATAAGGAACACAGAATTT  
TAGTCATTCCACAACCATCTGTTGAATGGCTGCTATTGTTAGTATCTGGTGGAACTGAGAAGCAAGA  
TGACTATAATAGGATCTCTTTCTGGAGATGCACAGTGGACAGTAGTTATATGATGATGATAAGGACTC  
CAGAATAGTTCTATACATGATGCTCTGGGGCCACATGCAGATTCTGATGAGAAACAATTAACCTTTTTTG  
GCTGCTACCTGAGAAGGGTAAATGTCACCTCAGGAGGTTTTGCTTTTACCACATAGAAAGGAGTGT  
GAGTGAAGGCTAGAGGTGTAACCTTGGTCAGGGCAGGGTGACACATAAAATTAACCATCACAGGGAAG  
GGTGGCTCTTCTGTCAGTGTGGGAGGACAGGTTTGAATGCGCTGAGGTGAAGGAGACTGTGTTATCTCTG  
TAGGCCAGTGGGTCTTACTCTGAAGTCTTTTGGGTGGGACATTTCATGGACTTCAAGAGACCTGTGAATGC  
CCTAAGATTATAAGTAAATCTGTGAGTCTGTAACATAAGCTAAAGCTATTTTCTGGGGCCACCATCT  
AAAGAAGATTCTGAAGCCTTAGGGTAGCCGTGGAGGAGACATGAAGGTCCATTTTGCATGGTAGAACCT  
GCCTGGCTCTTCTGTCAGTGTGGGAGGACAGGTTTGAATGTGGAGGTGTGGCAGGCATGGATTGGGAG  
GATTGGCAGAGGACTCACCATGTCCATACACTCACTGAGATGGCAAAATTTTATTAATCATCCAACCTGTG  
TATCAGACACTAAGAATAAGCTGGGAGGCCATGGCAAGTGAAGTCAACAGTCCCTGCCACAGTGGAGG  
TTATGGTATACAGGTAAGGCAGGGAAGAGCACTGCAAGGGTTTGGCCATTGCATCAGTCATTTATTTAT  
GCACATGTTTGAATCAACAATTTATTTCTATGCCAAGCTGTCTTCAAGGTGCTGGAGGAATGAAGCGTACA  
TTTCACTGGGGAAGACAGACAATAAGTAAACACATTAAATCTGGCTTGGCTGATGTTGGGGAGGGGTG  
AGTGCCATAGAGAAAACAAACCATTTATGCAGCCAAACAAATATGAAAAAATCTCATCATCTGCGC  
ATTAGAGAAATGCAAAATCAAAACCAATGATATACCATCTCACGCCAGTTAGAATGGTGATCATTAATA  
AGTCAGAAACCAACAGATGCTGGAGGAGTGTGGAGAAATAGGAACACTTTTACACTGTTGGTGGGAGTG  
TAAATTAGTTTCAAGCATTGTGGAAGACAGTGTGATGATCCCTCAAGGATCTAGAACCAGAAATACCATT  
GGCCAGCAATCCCATTTACTGGCTATATACCTAAAGGATTATAAATCATTTCTACTAGAAAGACACATGCA  
CACGTATGTTTATGTCAGCATTGTTTCAATAGCAAGACTTGAACCAACCCAAATGCCATCAATGAT  
AGACTGGATAAAGAAATAGTGGCATAATACACCATGGAATACTATGCAGACATAAAGAGGATGAAGTA  
ATGTCTTTGTCAGGACATGGGTGAAGCTGGAACCATCATTTCTCAGCAAACTAACACAGGAACAGAAAA  
CCACACACTGCATGTTCTCACTGGTAAAGTGAATGGAACATGAGAACACATGGACACAGGGACGGGAA  
CATTACACACCTGGGGTCTATCAGGGGTTGGGGGCTAAGGGAGTGATAGCATTAGGAGAAATACCAAT  
GTAGATGACGGGCTGATGGGTGCAGCAAAACCCATGGCACGTGATACCTATGTAACAACTTGACAT  
TCTGCACATGTATCCCAGAACTTAAAGTATAATTAAGAAAAAAGAAAAAACAACCAAGTGAAGAG  
GATGAAAGTAAATAGCTCGTTAGAATGGTGTGAGAAAGCCAGGCAGGGAGAGGCGCTGAGACAGGGA  
GGTCTGGATGTGTTTGTGGAAGAGCTGTGGCAGCACCTGGAACCTTGGGGAGCAAGGGAAGGAGTGTGG  
CAGGCAAGGGTGAGGGTGAGGGGCTGCTGGGCTTCCAGGTACAGGAAGGACTTGAGCTTTACTCT  
TGTGTGTGTGAGAAGCTGCTGAGGGCTTGGAGTTAGGGGAGTGAAGAGATCTCTACTATAATAGGGAGAG  
TTCGGGATCTGTAACCTTAACCCAGGAGCCAGCAAGCTCCCTGGAGGAAATGCAGTTTAAGCTGAGAAT  
GGGAGGATAAACAGGTGTTTTTCAAGAGAAGGAGGAGGCTCTAGGCACAGAGAACAACATGCTGGAAT  
GCTTCTACTAGATCATAGGGCAAAATGGGAGTGCAGGAGTAGGAGAGGGCTTCTGGGAAAGATACTTA  
TTTTAATTTTGCATGCATTGAGTTTTTGGAGTTTCTTTGGTTTGTTCATGTGGAGGTGCAGAGTGGGTAT  
TTAGCACATAGGTCTGAAGTCCAGGGGAGGGGTGTGGGACAGCAGTTGGATGTGGCAGAGATTCCACAAA  
GAGCAATATCATCTGAGAATGGCAGAGGGCTGAGGGCAGAGCCCTGAGGAACACTGGTGTTTAGGAGCC  
TGCTGGAGAAAAGAAATAGTCAAAAGGGAACGGAAGTGGAGTGGTTGCCAGACATAGAAGCTAGTGTCTA  
ACTAGATGTCTAGATGTGGGGAAGGTGTACGTATCTAAGAATGCAAGTTGAACCCCTGTGAACCTGT  
AATACCTAAGATAAGTCGTATAAATGTCTGGAACATAGAGCTTGATTTCCAGGAGAGATGAAATGTGTG  
TAGGTGACAGGAAACATGAATATGTGGGCGAGTGTAGTGTGAGCAATTTCTCAGAGGTGAATTTGACAG  
CATTTTGTCTTAGGAAGCTACAAAGAGACCAATGCTAGTTGGTGAAGGAATTCAGAAATTTGGACTTAAG  
TCTATATAATGATGATTTTTTTTTTTTAACTTGAAGTTTCCCGTTTATCACTCCAGAAATATAGGCAGAA  
GTTTGAGATTTTTATGTGATTTTTCTGGAAAAGATAGTTTCAGTGTTTTTTACATTCTCAAACAGGTTTA  
TGATCCAAAGAAAAGGCAGTGGTCACAGATACATGAACAGACAAGGTATTCAAAGGAGAACGTTGTACTT  
TATGACAGTTCTTTGGGCAGTGGCTTGCAGGATGAGTTGAGGAATGATTGGAGGCAGGAGAGTAATCT  
AGTAATTCAAATGTGGAGTATTGTTGATCTCTCAGACACAAATGGAAGAAACAAGGAATTCAAAGAAAGAT  
AGGCAGAGTGTTTTGAAGAAATAATTGATGAAATTTGGTAATGAGTTAGATGTAGGAGATATATTTAGCA  
AATATTTATTAAGGACTGTATTAATCTGTTATCATGCTGCTAATAAGACATACCAAGACTGGGTAATTA  
ATAAGAAAAGAGATTTAATGGACTCACAGTGCCAGTGGTTGGGAGGCCCTCACAATCATGGCATAAA

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GCAAAGGAGGAACAAAGTCACGTCTTACATGGCAATAGAGTGTGTGCAAGGGAACGCCATTTATAAAAC  
CATCAGATTTTCATGAGAAATATTCACATCATGAGAACAGCACAGACAAAAGCCTGCCACCATGATTTAA  
TTACCTCCCACTGAGTTCCCCCAGGACACATGGAATTATGGAAGCTACAAATTCAGATAAGATTAGGTG  
GGGATACAGCCAAACCATATCAAGGACCTACTGTATATGGTTAAAATTGGGAGCAAATGAGACATGATTC  
TTGCCTTCTTTGAGTTTACTGTTTACTAGGGGAACATACACTTGTCAATAATCACCCTAAATATAGGATTG  
GAAATTGTGGTAAGTGCCATGAAAAACAAGTATAGGGAATTTTGTAGTGTACATAGCTTTGGGGACTTGAT  
TTGATGAGGGAGCCTTATGAAGTTATTGCCTAGAACTGAATTAACACCATTTCTAGGAAGTGGACATC  
TATTTGTGGTTCTTTAAATTTAGCTTTACAGAAATATTTCTTTAAAAACCAAGGCTTCTTAAATTTTT  
AAAACCTGCTTGGCTAATCAGGGGAATAATGCTTTTGGATAGCTGGTATCGTTATTTATGGTTGGAAAAAC  
AACAGTATTTGATTACATTGAGCTTTAACTTTTCTTTGATTAAATGAAAATTTTATTTGGCCCATAGTTT  
TTATTATGCTCTGTTTTTACTTGGTCCAAGAGATTCTATTCTCTGGACCAATATGAATACCTTCAGACA  
TCCCTCTTTTTTTTTTTTTTTTTTACCCAGGCTGGAGTGCCTGGCACGATCTAGGCTCACTGCAACCTC  
TGCCCTCTGTGTCAAGCAATTCTCTGCCTCAGCCTCCCAGTAGCTGGGATTACAGGCACCTGCCACCA  
CACCTGGCTTATTTTGTATTTTACCAGAGATGGGGTTTCCCATCTCGGCCAGGCTGGTCTTGAACCTC  
CTGACATGTGCATAGATGCGCTTGGTCTCTCTAAAGTGTGGGATTACAGGCATGAGCCACCACCCAG  
CCCAGACATCCCTCTTAATTATGTTGAATATGTAATATCGGTGATTTTCAATTTGAAAATATTTAGTAGTCG  
AACTAGATCAAGGCACTTAAGCTTCTATTTCCATAGATGCAGTGGTATTTGTGCTTTTTTATATGATCT  
CTCATGCTTCTGGACATCCTTTTTCTGCTATTCTTCATTCCTTAGCTACACTTGGTGTCTCGTGGTTGT  
AATGATGTGCTCATAGATGCGCTTCAATTCATTCGATCTTCAGCTCTATTCTTTCCAGAGAATCTCTAC  
AGGCATCTGTAGGTGAAGGACATCTAATGTCTTAATGTGTAGCTTGGTAAACCAAGTCAACTTTCTATC  
TGAGTCTTAAGAGAAAGTGTCCAAGATGAGAAACGTTACAGGTTTGGTGACAACCTCAGTGAGAAAAAGAA  
GAATTTTACAAGGAAGGAGGTATCTTAGTAATTTTGTCTAAAGAAGTAGGTAAACCTTCACTTATAATAAA  
GGGATGAGGCTCGGTTAGGGTTTGTGAAGCTCTCCCTTAGGAAAGCAAAACCTGAAATATTTTGAATCTT  
TTAAAGAAGGAAATAAGAGTCTTTTAAATAAATTTTAAATTTATTTTATATATTTTTTATAGACAGG  
CTCTCACTCTGTCTCCAGGCTGGAATGCAGTGGTGAATCATAGCTCACTGCAGCCTTGAATGCCTGGG  
CTCAAGCGGTCTCTGTCTCCAGCCTCCTGAGTAGCTGGGACTGCAGGCATGAGCCAATGTGCCAGCAA  
GAGACATTTCAATTTGGTGTGATGTGATGACAGAAAAACAAGGCTTTGAGGCGGAAGGAGCAGAAAGAA  
GGATGGACTTAGACATGGTATAGGCACCTTCTACTAAAGAGCTGTGAAGCTAAAAATGCCAGGTCTATGA  
CAGGTGCAGTGGGCCAAGGCCAGGTAGAGAGCAGCAGGAAGAGAGGAGGTGGGGACCTGTACCTAGGCC  
ATCTGCTGGGACTGATCTAGCCATAGGTACTCAGAGAAGCCCAGATTGGTGCCTGACCCACCCTTATGGC  
CCAGACATGGACACCTCCAGTCTGTCTCTCTCTGCTGCCATGGATGGGCTGTGTAGTCTGTATTTCTG  
AGGACACAGCTCTCTGTCTAGAGGAAGTTATGTTATCTTGATCTGATGGATACTCAACGTGAACATTATT  
TCAACGTGCCACAGGCTCTTGGAGCCCAGAGGAAGACCGCTCTTGCCCTTTAGTTTATATTCTTTGTTTT  
TTTTTAAATAACATTTTGACAGTCTTTATGGAGTAAGTCTGGGCCAAAATGATAATTGACAATGTATTATT  
ACATGGATTTCTTAAGTTGGCTTAAAAAGTTCTCTTTATGGTTAGTGAATATAGCCCATGTAGTTTCCCGT  
CTTCTTTAGATGCCTTCTATTCTATGCCCAAAGTCTGCAGTTGATTTTCAGTAAGCTGGGGTCTATCTT  
AGAGATAAAATGTAGATGAATGGCATTTTGTCTGACAGCATACATCTTTGCTATTCTTGAGGAAATGGGC  
TCTCGCTATTAAATCTTTGTCAATATTTATAAAAAATAGTATTTACATATTCTATCTATATTGTGGAAC  
TATGAGATTTCAAGTCTGATCATTTGATATCAATGTTGTTGAGTCCCTATTCCAAGTGAGGCATATGCT  
CTAAGCACATGGCATTTTAAAGATGAATAAGACACCAAGAACCTTGCAGATAGTAATGGAAATGAGAATT  
AATCAATTGAAGATTAAATATAGTAAGTAGCAGAGAGAAATAAAAAAATCTTCTAGAGAGTTCAAGACAG  
GGATGTTGATTCAAGTTTATGGGATTAGGAGTGGCTGGTAAGGGAGGCATTCAAGGCAAAAGACATAAAA  
ATGAGATTTCAAGTCTGCACTATTAGGATGGCTACTATATTAGAAAAAGAGAGTAAGTGTGGAGA  
GGATATAGAGCAAAATAGAAACCTTGTGCTTGTTCATGAGAATGAAAAATGGTGCAGCCACTGTGGAATA  
CACTGGTGATTCTCAAAAAATCAAAATAGAAATTATCATATGATCCAGTAATTCTACTTCTGGGTATATA  
TCTAAAAAGAAATAAAAATCTGGGTCTTGAAGAAATATTTGTATACTCATAGTTATAGCAACATTATTTCAT  
AATAGCCAAAGATGAGCAATCCAGATGTCTATAGATGGATGAATGGGTAAACAAAGTCTGTGTAGTA  
TATACAGACAATGGCATATTAGTCACATCATGGACCTTCAGGACATTATCCTAAGTGAATATGCTAGAC  
ACAAAAAGCAAAAGTAGGGTTTCACTTAATGAGGTATCTAGAATTGCCACATTACAGAGAACAAAAGTA  
GATTGGTGGCTGCTAGGGGATAGGGGAAGGAGAAAATGGGAATTATTGTTGAATGGGTATGGAGTTTCA  
GTTTGTGAATGAAATGAAATGTTCTGAAGACTGGTTGCACGATGATGTGAGTATATCTAACATGATTGAAT  
GATGAACACTTAAGCGTGGTTACGATGGTAAATTTTGTGTTATATATATCTTACCACAAATTTAAAAATA  
TAGCATTTTATATGTAGGCGTGGGTGGGAAGATACTTGACACATTGGAACCTTCTGGCCATGCGTATACT  
GTTCACTCACTTATCTTCTCATTTCACTCAACAAACATGTATTGAATGCTTGCTATGTGCTGGGCACTGAG  
CTAGATATAACAATTAATAAGGCTTATAAGACATTGAATCTATCAATTTCACTGCTTGTAAATATCTACT  
CCCACCTCCAAAGGCCTAAGCTTCTACAGTTAGATATTCATAGCTGCTTCTCTACTGACTTGAATCATGC  
ATAGGATATTAGTAACAAGCAATAAAAAGATTGAGGTTGATGGGGGTGGGTTCAACAGCATGGTGGTG  
AAATGGAAGAGATGGGTAACAGAATATGAAGTAGAATGAAAACCTGTGAGCCAGTGCTCTCTAATGAAC  
ATTAATAAATAAAGAAATTCCTATTTGAGGCTGCCAACCTCAGAACTAAGTTATTTAGAATGGACGAAAT  
GGCAAAGTCAGACGTACTCAACCCAGGAGGCAATATTTTGTGAATATTATGGCAAATGTAGTTTGAAGAA  
CCACTACCACAAAATTTGTGAACCATATAATGACTGAGAAAGGCAGGGAGAGGTTATACAATTTGGGCTAA  
AAGGAAAGACAGGGCTTGTGAAGGGGAGCGCCAGTGAAAGTCAGTGTGGTTCCGGGTATTGGGTGGGGAC  
TGGAAAGCAGGAAGCTTGAAGCTTCTTGGCAAGAGACCCTGCTGGAAGGGCTATCATCAATTGACTTTAG  
CTCATCTTAGGATTTTCATTTTTTAAAAATGTTTACAGGAACCTTCACTCCATCTATACTTTCAATGTC  
TGCCATACCTTTCTTTCTTATACAACCTTGAACACTCTCTCCATTCAATTTAAATATATTATGGAGTGCCAA  
CTACATGCCAGTACTGTGCTGGGCTCTTATTCACCTTTATTTGATTGCACATGCCTGCCAAGTCTCTGG  
GCCAATATAACATCTACTCTTATGCTGGTGGGAGAGATGCAAACTCATCTCTCTACTTTTCTTACTTCTTA  
CCTCCTTCTTCCAGTCTTCTTCAAGTTGTCTTCAATGAGGCAATTTCTTTTACCTGTGTTTTTAATCCC  
AACTCCTCTAGTTTCTTCTTGGCTTATTTCTTTTATCTTCTCTTGTGCTTTTCAACATTTCCCTTTCT  
CCTGGCCCATGCCCTTCAGTCTACACGAGGCTTCTCAAGTCTCTTCAATTTAAAAAATTCATTTTCTTG  
GGTCTTATATCTTCAGCTGCCACCTATCTGTATCTTTTCTTCTCTCTCAAGTTCTCAAGGAATG

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CCTTCCCTCATTTTCTCTCTTACATTCCTCTGCTGAATTTTGGCTTGTGCCTGTACCTGTCTAAGGA  
AACTCCTTGCTAAGAGTCTGCTTTGTCAGGTCTGAATTCACCTTAACAGTCTTTGCTTTGTTGACTTCT  
CTGCCCCATTTGCCATTCTTGATCATCTCTCCATAAACCTTTCTACTTAAAGCATTCTTACTCCTTATT  
TTCTTGGTTTTCTAGAACTCTCTTACTGTTCAATTTTCAGCTTCTCTTCTGTGTTCTCTCTCTCTA  
CATTTTTTTTTAGCTTTCTACTTTCTTAAAGCATTCTTACTTCTTATTTTCTTGGTTTTCTAGAAATTT  
CTTACTGTTCAATTTTCTAGTTTTCTTCTGTTCTCTGATTGTCTCTCTTCTACATTTTTTTTTCTG  
TGTTCTCTGATTTTTCACGCAGTCTGGAGTTGTCTATGATCAATCATAGCCTACTGCAGCCTCGACATCCT  
AGGCTCAAGTGATTCTCCACCTCAGCCTTACAAGTAGCTAGGACTACAGTCACACATCACCATTCTCAG  
CTAATTTTTTTAAGAAGCATTTTTATAGAGATGGAGTCTTGCTATATTGTGCAGGCTGGGCTCAAACCTAC  
AGGGCTTAAACAATTTCTCTGCTTTGGCTTCCCAAAGTCTGGGATTCCAGGCATGAACCCCATGCTCA  
GTCTCTACATGTTCCCTAAAGAGGAGTTTGAATATTGAAGAACAGTATTTCAAATTACATTATTCAAGT  
TATAAAACTGATATCCAGGTTATGTGGCAATGACGTAAAAATTTGAATGTTATTTTTTGACACATG  
TTCTGTGTTGTCATCAGTTTCTAGTTTCCAAATGTCCAGCTGTTTTATGCTTTGTCTCTGTTTCCC  
AGAGACCTGAGTGTGGTCTAGAGTTGGGATGAGCATTGGTCTCTAATGGTTCTGAAATAATTGTATATT  
CCTGCAAAAACATTAAGTCTATTAGAAACAGCTAATTTCAATTTTGTCTATTTTATAGGTAACATATTCT  
GGTGCAGGTAGTATGTTTTTAAACAAGTTTGAATAAACAATTTCCCTCAAGGTTAATATAATAGGCA  
ACACCTTTTGTGCAACAGACGGCAAGAGGTAATGAAAGATTAGCTTACATTATGATTATTATTCTAAA  
ATGTCAGGATAAAGTGGATCTGCTGCATCTCCAGAGAGTGCATGTTTTGCTTTTCTAATGTTAATGGAT  
TTACTGTTTTTCCCTCAAGGCAATTCAGATAATCGACGCCAGGGTGGCAGAGAAAGATTGGCCAGT  
ACCAATGACAAGGGAAGTATGGCTATGGAATCTGCCAAGGAGACTCGCTACTGTGCAGTGTGCAATGACT  
ATGCTTCAGGCTACCATTTATGGAGTCTGGTCTGTGAGGGCTGCAAGGCTTCTTCAAGAGAAGTATTCA  
AGGTAATAGTGTGTTGAAAACGACTTCTATTTTGTATCTATGAGCAGATCCTAAGAGCCAAAGCGACTG  
AGGAAGGAAGACATAGAATCAGCCATTGTTGACAAAACATGAATCCCTAGTAGGCTACTAGTATCTTTGG  
TAGAAACATGGAGAAGAGACAGGATCTCAGGAGAAGGAGTTGACACATGGCAGGGCAGCTGAGGCTGAGT  
AATTCGCTTCTCTCTTTGGCAAGACTCAATCAGTCTTGAGCAACTCTACAGAGAATTCCTACTAGCTG  
GATCTCTGAGGAAAAAGAAATGTTGTCTGTGCTCTGAGTGGGGAATGCCAGATGGACATTCTATGTTGG  
TAGGCAACTTTTGGCTATATGATCTGCTGATGCTGTTAATTGTCTATGCTAATTTATCTCTACTCAGG  
CCTTGTCCAGGCAATATTCTGTTTTGTTCTAGTTTGTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
CTTGTCTCAATGGATGACAGGATATTTTGCTATGAGCTGACTCAGTGGTGGTGTCTGTAATGGGGAGA  
TATCATCTTTATCAACAGTTATTAAGTATCTACCTGTAGCATTTCATTTTCCCGCTGCCTCCATTGTT  
TTCTTGTCTATAGTTTGGCAATTTATGCTAATATACGGAGAGCTATACTTTATTTCTACTCCAGAAATG  
CTCTATTATTGCATTATAATAGGATACCTTGGGGAACACTAATCATTTTTACTACCTAAAATACCTATG  
CTGAATATCTTTATCTGATAGGAACAGAGATCTGACAGCAGCTTAGGCTAACCAATTCATTTTTATC  
TTAAGTGTGGGCAATTTTCTCTCTCTTATTCTTTACCTTTTTCAGCTTAAGTGAAGGTTAGTATAAACA  
CTAAGAAATTTCTGATGGAGTTTTCGATGAGTTCTCTACAAAACCCAGATTAAAGTAACTTGTGTA  
AAACCAGAGTCCGCTAAGTTAATAAACACTGATTGAAGAAGTGATTCTCATGGACTTTCTGTGATAGCTC  
TTTCTGCCCCGATATGAGATGAAAGCTGGGGGATGGTATATAGTATTTATTTTCTCTCCGTTGCCAGT  
GGGACTTTTTTTTTTTTTTAAAGCTGTTTCATATCTTAATCGAGTAGCATGTGAGGTCAACATGGTCTA  
TTTTAAAGCATTTTTCTTCGACACATTTGCTTTTAAACATCTTTTGAACCTGCTGTGAGACACATGGACT  
TTTTTGTGGTATTTTTATACAATTAATGATATTCTCAATAGTAATCTTTGTGTGTATATATATAGAA  
ATAAATTTCTAAATGTAAGTTAATATATTTATTATTTTCTAAACATATATAAATATATATATGCACACAG  
GCTATTTAATTTTATAGATGATGCTATTTAATTCAGAAAAAATGACATTTATATTGATTTAGGTT  
AGTATAAGCCCTTAGAGGTGTTTTGACAACTCTCTAATTTGTGGTTTTACTGTTTTATTGATTTTATAT  
AATCTAAATACCATTGTTTTTACCAAGCATTAAATTTGGCAGTGAAAGAGCGCTGACAGAGGTATGGT  
TAGTAGATAGTCTAAGTGCACAACTGGATGGATTGAGCTGAGACTGTTCTCATCAGTAAAAATGATT  
TGAAGCAGTGGTGGCAAGTTTTCTGTAAAGGGCCAGATAAATATTTTAGGCTTTACAGGGGCCAT  
CGAGCTCTGTGTCAGCTACCGAACTGGATTATAGCCTGTAAAGGTGACCTGTAACACATGGAAGTGATT  
ATGTGCTAATAAACTTTATTTATCAGAATAGGTAACAGATCAGCCCTGGCCCGTGGCCGATCCCTGATT  
TAATGTTTATTATCTGATCTAAATACCTTTATTATGGAAGGGAATAGGGGATTTTTAAATCTAAAGTT  
TTGATTATTACATTTTACTGAGAACTTACTCTATACCTGATTAGATGTTCCGAGAGAAATAAAAA  
GTGTAAGACATAATCCATAATACCATAAATTTAAATGTATTTAGGAAATTTATTGAGGAAGTAAATG  
TACTTGTCTCATGATACAAATCAGAAAGTAAGTCAGTATTGATAAAGTGTTACCTGTATGAGAAAGATAA  
GGAAACAATAGAGAGATGTAAGAAATGAAATACCAGTTATAAATTTAAATTTAAGATTGAAAGTGG  
AAATGATCTTCTCCGAGAAACAATGGCAATATTCTCACAATTTTTTACATCATTTTTGTTTCAGCATTT  
AAGATAAAATATATATAAATTTCCCATTAACATTTAGTATTGTCTCTAAGCATTAAAGACAGAAAAACAGAA  
GGAAATATATTTCTAAAAATCAACGAATACAGTGTGAGATGTTTCATTGGTATGGCATTATCTCAAGTT  
CAACATTTTTGAAAAATGTCTGCTTACTCTTTGATAGTTAAAAACAAGTATCTCAGCTGGCGTGGTGGCT  
CAGGCTGTAAACCCAGCAGTTTGGGAGGCTGAGGCGAGTGGATCACAAGGTGAGGATCGAGACCATC  
CTGGCCAACATGTTGAAACCCCATCTCTACTAAAAATATGAAATTAGCTGAGCGTGGTGGTGCACACCT  
GTAGTCCCAGCTACTTGGGAGGCTGAGGCAAGATAATTGCTTGAACCTGGGAGGCGAGGTTGCACTGAG  
CTGAGATCATGCCATGCCCTCCAGCCTGGTGACAGAGTGGAGCTCCATCTCAAAAAACAAACAAACAA  
CACCACCACCACTAACAAAAACCTCTTATCGCCGTCTTGTATACGCAGACAGCTAGTAGAATTTTACTG  
AAACAGTAACTTATAAATGCAATTTCCACTTGGTTTCAGAAATCTTGTGTATCATAGTGTGAAGTCA  
CTTATCTTAGGCTTTTTAAATGGGATAAATATTGAGTCCAAAGTTCTGGAAGAAGCCTAGAAAGAAGGCA  
GAGTTATTAATTTTAGATATAGGGAGGAACCTTAAATTTATTCAGTTCTTCAATTCATTCACTTATTCAT  
TGACTAGCTTTACTAACAAGCCCTATGCAAGACCTGGAAATGCAATGATAGAAAAACCTGGTCCCTAC  
CCTCAGCAACTTGTGAGGTAAAGGGGATACAGACTGATAAACCAGCAATTAGATGATGGTGTCAAGAT  
AGAGGTGAAGGCAGTGTCTTATAGGATCCAACTCCACTCAGTCTGGTGGTGGTGGTGGTGGTGGTGGT  
GAGGTTTCTGATTAAATCTGGAGGGTGAAGGAGGAGCATGGTGAAGAAGGAGGGAATGCATGTTTAG  
CCATGTGAATGAGTCCATGAGTGAAGACCAGGAGGAAAGGCAGAGCGCGGGGAATTTATGCGTAATATT  
TAACAAAATTAATGTACTGTTAAACAAGACATTTCTGGGCCATGGATTAACTCTAGACTGTGTA

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CCAAGTAATTGATTTCCTTTTACTTTTAAAGCATTTCATGTATTGATTGTTTGTGTATATAAAGG  
 GAAATACCACAACAAAGTTAAGGGTTTCTAGTTTCTGCTTTCTCATCATAGTCTTGATAACTTGGAACTAA  
 AAAGTTTTTGTCTGAAATGTCTGTGACTCTTTATAAATCACACTGCCCCCAAACACATTTAAGGATGGT  
 GAAGGGTCTGACACGTAGGTGGGAAGTTCTGAAGATGCCGAGCTCTCCCTGTTTTCCTTGTTACTTAAG  
 AAGAGAGCTAGAAATGAGTGTACATCAGATTATTTCTCATGTTCTAAGTGTTTTGGTTGAAGAGGTAAGT  
 GTTTGGCTTGAAGCATACAAATTTTCATCCACTACTTAGTGACAACTTGATTACTTAAGAGATTGAG  
 TAATGGCCTCCAGTGAAACGCATTCTTTTTAAAAAGCAAAGTGAAGGATGCTATTTAAGTCAGAGGGGC  
 AAAATTGGATATTTATGAGTTTATTAATCATTGCAGGCATAGAAGTAGTGTTCCTTAAGATGTGTTTTA  
 GACAGAGTCCCTGGGATGAGTTATATAAGCAGATCTGGTTGTAGCTTCAGCAGCCAGATACTACCTTTGA  
 GTATTACTTCAAGGAAAAAGGACTCCACTGAGCTCACTGCTTCTCTTTCATTATTTTTCAGAGGTTGT  
 GTGGCGTAGAGGGGCTCAGGCCTACCTATACACCAGTATGTGGCCATTTATATATTTTCTATATA  
 GGTGCCAACAGAGCTGCTCATCAGATCAGACAGACATAGCCCAGGCAAGTATTGATTTACAGATGATCT  
 TTGGCCAGGAAGACATGGTATCAGGGTAGAGTCTGGTTATGGGTCAATGCAGTGGGGACCTTAGGTCCCTA  
 CAGGTATAACTGAGAGCTGATCCACCAGGCCTTAGAAAGCTTCAGGGTGAGACAGTCCAGCACCCCTGGA  
 TAGCTCCTTTAACAGCTGTGGCCGGTAAGCAGGCATTTATTGCTAAAGAACTCAAGCCCATTTAGCTGG  
 CTTTCATCTGCTTTGTAGAGCTCTGTTAAAAAGAGTTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGT  
 TTCCTGACTTTTTAATGATTGCCATTCTAACTGGTGTGAGATGATATCTCATAGTGGTTTGTATTGTCAT  
 TTCTCTGATGGCCAGTATGATGAGCATTCTTCATGTGTTTTTGGCTGCATAAATGCTCTCTTTTGAG  
 AAGTGTCTGTTCATGTCTTCGCCACTTTTGTATGGGGTGTGTTGTTTTTTCTTGTAAATTTGTTTGA  
 GTTCATTGTAGATTCTGGATATTAGCCCTTTGTGATGAGTAGGTGGCGAAAATTTTCTCCCATGTTGT  
 AGGTTGCCTGTTCACCTGATGGTAGTTTCTTTTGTCTGTCAGAGCTCTTAGTTTAAATAGATCCCAT  
 TTGTCAATTTTGGCTTTTGTGGCATTGCTTTTGGTGTGTTGGACATGAAGTCTTGGCCACGCCATATGT  
 CCTGAATGGTAAATTTCTAGGTTTCTTCTAGGGTTTTATGGTTTGTAGTTGGTGGGACTGTAAACTAGTT  
 CAACCATTGTGGAAGTCACTGTGGCGATTCTCAGGGATCTAGAAGTGAAGTAAATACCATTTGACCCAGCTA  
 TCCCATTACTGGGTATATACCCAAAGGACTATAAATCATGCTGCTATAGAAGACACATGCACATGTATGTT  
 TATTGCGGCACTATTCAATAGCAAGAGCTTGAACCAACCCAAATGTCCAACATGATAGACTGGATT  
 AAGAAAATGTGGCAGATATACACCATGGAACTACTATGCAGCCATAAAAAATGATGAGTTCATGTCTTTTG  
 TAGGGACATGGATGAAATTGGAACCATCATTTCTCAGTAACTATCGCAAGAACAAAAACCAACACCG  
 CATATTTCTCACTCATAGGTGGGAATGAACAATGAGATCACTTGGACACAGGAAGGGGAATATCACACTC  
 TGGGGACTGTGCTGGGGTCGGGGGAGGGGGAGGGATAGCATTGGGAGATATACCTAATGCTAGATGACG  
 AGTTAGTGGGTGCGCAGCACAGCATGTATACATATGTAACCTAAGCTGCACAATGTGCACATG  
 TACACTAAAACCTTAGAGTATAATAAAAAAATTTAAAAAAGAGATCTTAGTTCTTTTGGGC  
 TTGGGGACTCACTCTTGTCTCACTTAAAGTGGATTGGTTCTTACATTTATTTTCATAGTTGTGTCTGGTCA  
 CCTTCTGGCTTGATGTATGCCCCCTATGTCTGGAAGGTTAGAGAATGGGGTAGAAGTGGAGGCTGCCCG  
 CCCCATGTAACTGATTTTATCTTTTCAGAGATACAATTGGGATCCTAACTCTTGGTCTCCGTATTTTCC  
 AACTTGCTCTTATACGATTCACTTTCCATGCAACAGCAGGAGAGATATTTTAGATATATTAATCAGGTC  
 CTATGGTCTTGAGTTTACAGCTCTCAGTGTAAATCTTACTCTCAAGAGAAAAATTTTCTTCTGCAGCTG  
 AAAACATTGACATATTCTCTCTCTATTTCTTCTCCCCATTCACTGTACTCCAGGCACACCCAGCTTTT  
 ATTTTTATTTTATTTTGTCTTATTTCCCTCAACAGCAGCAACATGTCTCTCTCAGGATCTCAGCACATG  
 GGTTCCTCTTTTCTCTTTGCTTGAATACCCAGATCTTTACTTGGCTGGTTTCTTGTCTTCAATCTG  
 CCCAAGTCACTTTCTCAGAGTAGTGTACCCTTCCACAGAGTAACTACTCTTACTTCTCTTTACAGC  
 TCTCAAAATCTTATGAAGTTTCTCTATTTATTCATTTGTTTGAATATTGTCTGTCTGCATCAGGTACCGT  
 GCAAACTTGGATGTAACTCAGTGATAGCTGATTCTGTTCAGCATTGTTTGTGCTATAGCTCCAGTGC  
 TTTTAGTCATGTTGGGCACGTCCCTACTAAATAGTAGAATATGGCGAAGGGTCAGAGTCATGATAGATAG  
 CCGGATGTGGTGGCTCATGCCTATAATCCAGCACTTTGGTAGCTGAGATGGGCAGATCACGAGGTGAG  
 GAGTTCAAGACCAGCCTGACCAACATGGTGAACCCCTGTCTCTACTAAAAATACAAAAATTAGCCAGTTG  
 TGATGGCATGTGCTTGTAAATCCAGCTACTCAGGAGACTGAGGCAGGATAATTGCTTGAACCTCGGAGGT  
 GGAGGTTGCAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT  
 AAAAAAATAAATAATGATAGATAAAACTGCTAGAGGCTCTCTGAGAAGGAAGAAATGTCACTGGGT  
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 AGGAAAATCCAGAAATGTGAACAGTATTGAGAAATTGAGTAAGCCAGCTTTGAGAGAACACACGGCTT  
 ATTGTCTCTCTCTCTGTTTTGCTCTCTCAGCTCTCTAAAGTGGGCATTCTCTAGGGTCTGTCTTCAATC  
 TCAGCTCTCTTTCT  
 ATATATATATAATTTGTATATATATACAAAATATATATATATATAATTTTATATATATATAATTTTAT  
 ATATATATAAAAAATATATATATATATAATTTTATATATATATACAAAATATATATATATATATATATAT  
 GGCTGAATTGTGCTCTCCAGAAAGATATGTTGAAGTCTAATGCTCAGTGCCTCAGAAATGTGACCTTATT  
 TGGAAATAATGTCAATCCAGGTGTAATTAGTTAAGGTGAAGTTATCTGTGGTGTAAACCCACAGTATACT  
 TCCAGTATATACTTCAGTATATGGGCCCCTAATCTAATGTGACTGATATCTTTAGAATAAGAAAGAAATTT  
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 TTCTCAGTGACTCCCTGTGTTTCCCTCTGCCACAGCCCTCTCTCTGCTGCTGTGTGACAGTTCC  
 CTGCGCACTCCCTCCGGCATCCGTACTTCAAACTGGGGAGTTAGTTATTTCCATTGTTTCTTATTGACAGC  
 CTCTGGCTCTGACGTTTCCAGAGCTGTTGCATAGCTCTATTGAGTCTATCTCTTAAATGCATTTTTCATC  
 CACTTACCATTGCTGAGTTAGCTGCATTACCTTTCCACCAGGATGCTTGCAATAATTTATTGTTTCCATT  
 GCCTTCTCTCTCATCTAAGCCGTTTGTCTATGTCTTTTTTCTTGTGCGAGACATTCTGCACATTGCCAC  
 TCTATTAGTGGTCATAAAGCAAACTCACTGATCATGTCAATACGAGTACAAGATCCTTTAATGACCTCCA  
 TAGCCCATGGAATGGTCTTAAACAAGAGTTCAAGGACTGCCACAATCTTGTCTAGCCTATCTTTCTAG  
 TCATTTTAAAGTCACCATTTTACTTGTGAAATAGGCACTCCAGACACAGTGAATTCCTTGTCTCTCTAC  
 AAATATGATGATTCATTTCTTTGCTGGGAATTTCTTTCCAGATTTACCTGTAAAAATCTTCAACCCCT

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AATCAAAAGTGACTGTTGTTAAGCCCCGTAAGATAATGCAGAAATTCCTCTCTCCTGGGACCTCGATAT  
TAGTTTTATTCCATTGTTATGTCATATATTTGATTGCCATGTTCTGTCCCATACTGACTGTAAGATCCTTA  
AAGGTGAGGGCCCAATATTCTCAGAGTCACTCAATAAATAAATAAAGAAATAAATGGAATTAGGATCAG  
TTTGTGGGCTTTAGCAACACAAAAACATTACTTTTCAACATGGGAGAGGTATGATGAAGGAGTTTTT  
TTTTTTTTTTGAGACAGAGTCTCACTCTGTCACTGAGGCTGCAGTGCAGTGGCATTGTGTGAGCTCACAA  
CAACCTCCGCTCCTGGGTTCAAGCAATTCCTGCTCAGCCTCCCGAGTAGCTAGGATTACAGGCGTCT  
CACCACCATGCTGGCTAGTTTTTATATTTTTTAGTAGAGACGGGTTTTACCATTGTTGGCCAGGCTGGTC  
TTGAACCTCTGACCTCAGGTGATCTACCCGCTTGGCCTCCCAAAGTGTGGGATTACAGGCGTGAGCCG  
CCGCACCCGGCTGATGAAAGAGTCTTTAATGCAGATTAATCTGGCAGAGGTATATAGGAGGGACAGAGA  
AGGGAAGAATCAAAGCGTGAAGACCAATTTGGCTGATATCACTAGCTTAGATGTACTAAAAATCTGT  
ACTTTTTGGTATTTTGAATGGAAGAAGGGAATAGAATAAAGGATATTATAATGAAAGGATATACAT  
TGCTTGAAGSTAATTAATATGGGTTATCCAGGAGATAAAAGAGTTAAAGAGGTTGAGACATAGACTGAA  
TGAACCTGAGAAATGAATGACTTGGTCACCAGAGGAAGGCCAGTCATCAGGGGGTAGGATAAGTTCAATT  
CTAGACATGCTGCATTTGAGATGATAGCTGGATGTCAGATGGAATTATCCAGCAGCCACAGAAACAGAA  
TCAGCTCTCTGCGGATATTTCCAGGGGTGGGATTTGAATTAATTTCTCAATTAATTTTAAAGAACTTG  
ATGAAAAGAAATGGTCTGAATACTTCTTGAAGGTTGCACATTATTAATAATGGAGAAATAACTCTAAACC  
TTCTCTTTGATTTTCAATAATATAAGCATTCCCTGAATCTTACCAACCTTTGTAAGAAACACTCTTAT  
TATAAAAAGTGATGTGCAAGCCCTTCTAAACAGGAAATGATAAATTAGTCTACAGGGCCAAATGCA  
GCTCTCTGGGAGCTTTGAAATTCAGAAAGAACATCCTGCTACCAGCATTAAGCTGTACAAATAGTAAAC  
TGCAGAAACAAATATAAGCATTTTTTATGATGTCCAAACAAGAACCAAGCAGGTGTTTTTTTTTTTTTT  
TGCAGATTATTTATCTGTGGCAGTTTCATAGCCTCCTTTTCGGACCCAGAGCTTGCATTAATCCTTCCCTT  
ATTTCTACTTACGTGTTTTACTCTCCATCATGTGTTAACATACATACTGTGCAACAGAAATGACTATGGA  
GGCTGAGGCGCAGAGTGTAGTGTGTACACATATGAGCTGTGATGTAATTTTCAAGTGAAGGAGCTTTG  
CAATGAAACTTTTTAAAGAAAGTCATGGCCGGGTGCGGTGGCTCATGCCATATAATCCAGCACTTTGGGA  
GGCTGAGGCGAGGATCATGAGGTCAAGAGATTGAGACCATCCTGGCCAAACATGATGAAACCCCGTCTC  
TACTAAAAATACAAAAATAGCTAGGCATGGTGGTGTGCACCTGTAGTCCCAGCTACTCAGGAGGTGGAG  
GCAGGAGAAATGGCTTGAACCTGAGAGGTTGAGGTTGTAGTGAGCCGAGATTGCACCACTGCACCTCAGCC  
TGGCGACAGAGTGAGACTCGTCTCAAAAAAAGAGGCGGCATTAACTTCAGGTATTGTTAAATTTGCTAGGTGTTGG  
CTACTGTTTCTCATGAGAGAAATAGAAAGACACACCATGAAAGTCAAGGCTGAAACCTCATTCCATGT  
AAGATGAGATCCCCAGTGTAAAGTCTTGTAGTGGTTAATGCCATCCTGTGAAACTTAGATGTGTTG  
TGCACACATGCACGCATATATTTGAAGAACTCAGAAGAGTTAAATCACAGCCTTTCAACCTGTGAAATGA  
CAGTAGTTCTTCTTTTCTCTCCTTTGGCTAAGTCATCTTTATCTTGGAGATAATTAAGCAAAAAAT  
GCCTCTGACAAATAAAATCAGTATAGAACCCTATTTCTTGGCAGCTTTTGTGGACACAGCTGAAGCTTT  
CAGAGGTCTTGAAAAACCATGGCAACAAATGCCTTTGAAGGGTAAGCAAGGTTCCAAATGTTTTTAATC  
GCTGGTGTTTTTCTGCTACCCTTCAAGCATTTTTCTTCATTTTTTGTTCATCTGATCAAAATTAATTT  
TCCAATTTCCCTACTAAGTGTCTCTGCTGGTCATGCCATTGACTATTTCCATTAAAGTAGTAGAGTTT  
GTGCCCACATATGGTTGTTAAGCTCATCAACAATTCATTAGAAAGCTTTGTTTATCAGTGGCAATAATTT  
TCCCATGAAATTAATATAGATAGGTTTTAATGGGCACATTTTCAAAAGGCATCAACTCGTCTCAAAATAT  
GTGCTGACACTGTTCTTACAACCATGGTTCGTGGCCTAATTCACCAAAATTTCTCTCTTTTTCATAGAGA  
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GTAAAGTCTTGCTGGCTATTTGGCTGAAAAATAACAACATGTAAGGAAATCTAATTTTATAGTCTTAA  
CATTTACTTTGTAAACTTGTCTGGCTACTCTGTTAATTTTCCACTTACGTGTGGGTTAGAGAGCAGAT  
TTGATTTTTTTTTTAAGCGAAAGATATGGCTTACCTGAGAAAGACATAGTGGGAAAGCACTCCTATTA  
TTTTCTCATATTTCCATTTTCCCTTTAGCGGAAATAAAAAGACATTTTCAGTTTTTTCAGTTGCTAAGAAAT  
GAAGGAACCAAGACAAACAACTTAATTTAATAATTACAATTTATTTCTGTAATAAGCACTGTTCTCT  
CTGTTTTCTCGGGAAAGAGTATGTGGACTTTCAATTTTATCCAAATAAGCATCATCTTTCTCTGATTAG  
TGTGGCAGTTTCAAAATCATGTATTAGGAAGTACAGAGTGAATGAGTAGAGAATTTCTAAATTAGCACCC  
AAGGTTGGGTGGCTAGATTATGTTTATAAATATGAACCTTTGTATTAAAGTGAATGATTTAAAGAAATGC  
CTGCATCACTTTAGGCAATTTCAATTAAGTGTGTGCACAAATTTTCTTATACATCAAAAGATAAA  
TTATAGTTTCAAAAATAGTATAAATTCCTAATTTTGTGCTTTTGCACCTCAGAGTTACTAATAAGG  
GATTTCTGTTTTAAATGATATTTATTTATTTATTTAGAGACGCAGTCTTCTCTGTTGCCAGGTTGGAG  
TGCAGTGGTGCATCTTGGCTCATTGCAACCTCTGCCTCCAGGTTCAAGCGATTCTCTGCCTCAGCCT  
CCAGAGTAGCTGGGACCAAGGCATGGGCCACCAACCACTAATTTTTGTATTTTTGGTGGAGACGGG  
GTTTCACTGTGTTGGGCACACTAGTCTCTAAGTCTGACCTCAAGTGGTCTCTGCCTTGGCCTCCCAA  
AGTGCTGGGATTACAGGCGTGAGCCACTGTGCTGGCTCGTTTTAAATAATTTAAAGTATATTTTGGC  
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ATTTGTTTTTTTTGTTGATTGCTAGCATGCTGATTACTCTTCTATTCTACAAGTGCCTGCAGGCCAGCC  
CCATTTTTGCTCTCTTCACTTCATTTTTTCACTTCTCCCTGTTTCACTCTTCATAGCACATTTGTACTCTG  
TCCACACCTAGAGACCTCCCTGTTGAAGTTCTTCACATTCTCTTCCCTAGAGAGGGTTAACTTGTGAGC  
TCAGAGACTTAAACTTAAATAAATGTAACAGATATGATTTGAATGACTATTTTATTTTAGCTCTAGGA  
GAAATGCAAGATATATCATCCATAGACCTGAAATCCAGCTAAGGTTTCTGCTTATACACAAGGTGAAA  
GGTTGTGATAATGCACATTAACAATAGAAGAGTTAAATTCAGCACTATAAGTGTGCTCAAAGCAGCA  
TAATGGGAAAAAGGGGATTTTCAAGAAAAATGGTATGAGTTCAAGGCAAGAGAAAAACAGAATGCTCTA  
GATTAACCTCAAGACTTTATGGAGGAGGTGGTGTTCATAGATACCTTTCCACAGAACCATTGAAGAGA  
GTTCTACTTAATTTGAAGTGGCTGTGATTTTGTGCTAGTATGCTCAATTTCTGATGTGTGATA  
ACTGTGTATTTTTATGGCAAAATCGCAATTACTTTTGACCAACCTAATAGAATAGTGTGGGTTAAAAA  
AACTATTTGTAATATATTCGAACATATTTCTTATATATATGTTTACCATCATTAGCAGTAAATCTATTT  
TGCATCCAGAGATTGAATAATATTTGTTTCTAGGATGTGAGTGTACTATTTTAACTTACTTTTGAA  
GTTTGACATGGGAGTGATATTAATAAATCTAAAGATGCTCCTAAAGAGGAGCAATAGATAATGTAGGTA

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1973 11th 1974 12th 1975 13th 1976 14th 1977 15th 1978 16th 1979 17th 1980 18th 1981 19th 1982 20th 1983 21st 1984 22nd 1985 23rd 1986 24th 1987 25th 1988 26th 1989 27th 1990 28th 1991 29th 1992 30th 1993 31st 1994 32nd 1995 33rd 1996 34th 1997 35th 1998 36th 1999 37th 2000 38th 2001 39th 2002 40th 2003 41st 2004 42nd 2005 43rd 2006 44th 2007 45th 2008 46th 2009 47th 2010 48th 2011 49th 2012 50th 2013 51st 2014 52nd 2015 53rd 2016 54th 2017 55th 2018 56th 2019 57th 2020 58th 2021 59th 2022 60th 2023 61st 2024 62nd 2025 63rd 2026 64th 2027 65th 2028 66th 2029 67th 2030 68th 2031 69th 2032 70th 2033 71st 2034 72nd 2035 73rd 2036 74th 2037 75th 2038 76th 2039 77th 2040 78th 2041 79th 2042 80th 2043 81st 2044 82nd 2045 83rd 2046 84th 2047 85th 2048 86th 2049 87th 2050 88th 2051 89th 2052 90th 2053 91st 2054 92nd 2055 93rd 2056 94th 2057 95th 2058 96th 2059 97th 2060 98th 2061 99th 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 272

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CTAGTTTGAGTTAAATTTACCATGCAAATAAATATAGAACATTTCTTCTTATGCATAGATTGTATTTGTT  
CTATTAACAACCATCCGTAAAGGTTTATTCATTCAATTTATTTTATTTGTTAGGAGAAATGTTATT  
TAAGCTAAGAAAGTAGACTAGTAGTTATTTCTTTTTTTTCTTATTATACTTTACGTTTGGGGATACAT  
GTGCAGGTTAGTTACGTAGGTATACACGTGCCATGGTGGTTGCTGCACCCATCAACCTGTCATCTAAAT  
TAGGTATTTCTTCTAATGCTATCCCTTCCCTAGCCCCCACCCTTGACAGGCCCCAGTGTGTGATGTTT  
CCCTCCCTGTGTCATGTTCTCATTGTTTCCAGCTCCCACTTATGAGCGAGAACATGCAGTGTGTTGTTT  
TCTGTTCTGTGTTAGTTTGTGAGAATGATGGTTTCCAGCTTCCATGTCCTATATAAGGACATGAT  
TGCATCCCTTTTATGGCTGCATAGTATTCATGGTGTATATGTGCCACATTTCTTTATCCAGTCTATC  
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GTGTGTTTTTAGAATAGATGATTTTATAATCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAA  
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GATCAGAGGCTCAGAAATAATGCTACACATGTACAACCTCTGATCTTTGATAAACCTGACAAAACAAG  
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AACTGGACCCCTTCTCTACACCTTATAAGAAAATTAACCTCAAGATGGATTAAAGACTTAAATGTAAGACC  
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ACAACTGCACAGCAAAAGAACTATCATCAGAGTGAACAGGCAACCTACAGAATGGGAGAAAATTTTTGC  
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AAGACATTTACACTGCCAACACATAAATATGCTGCCAACAGCATATGAAAAAGCTCATCATCACTG  
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AAGTCAGGAACAACAGATGCTAGAGAGGATGTGGGGAATAGGAACGTTTTTACACTGTTGGTGGGAGT  
GTAAATTAGTTCAACCATTTGTGGAAGACAGTGTGGCGATTCTCAAGGACCTACAATTAGTAGTTATTTT  
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GGATGACTGAATTCGTGTGTTAATCTTGTACTACAGGAACCCCTTGACATTGATTCAGAGCACCCCAAGT  
GTTTGTTCATTAACTCTTTTATTTTGCATATTATTTATTTTCAACTTTTATTTTAAAAATCAGGGG  
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CGGCTCAATGCAACCTCCGCTCCAGATTCCAGCAATTTCTCTGCTCAGCTCCCAAGTAGCTGGGAC  
TACAGGCGTACACCATGACCATGCCCGGCTAATTTTGTATTTTAGTAGAGATGGGTTTTACCATATTGGC  
CAGGCTGGTTTTGAACCTCTGACCTCAGGTGATCTGCCACCTCGGCTCCCAAGTGGTGGGATTACAG  
GGCTCAGCCACTGTGCTCGGCCCAATAGATAGTTTTTCACTCTTGCCCTGTCTCTCTTCCCACTTC  
TAGTTATCACCAGTCTATTGTTTCTGTCTTTATGTTTCAATGTTGACCAATATTTAGCTCCCACTTATA  
AGTGAGAACACATGGTATTGGTTTTCTGTTCTATGTTAGTTTGTCTAGATAGACTCCAGCTGCATCC  
ACGTTGCTGCAAAATGACACGATTTTCTTTTATGGCTGTGTAGTATTCGTTGGTGTAGATATACCA  
TATATTTCTTATCTAGGATAACTGATGGGCAATTGGGTTGATTCATGTCTTTGCTATTTTGTAGTAGTGT  
TCTGATGACCATATGGGTGCATGTGCTTTTCAATAGAACAAATTTATTTTCACTACTCTTATCAGGATAC  
CTGGGAGGAATTTCTCTACGAAAGTTAATTTGGGGGACTCCTGAAGATGAGTGAACCCCTTATTAAGC  
ACTTAGAGGGTCGAAAGGTGACAAGGGAACGTTTCAAGGTGTGACAGCTTGAGAGACATGCATATTCACCC  
CCACACCAGAGCTTAGTGAACCGTCTTTTCTATTTTCTCCAAAGCACCAAAATGGCCAGAAATGGAA  
GATGGAAAATGGACTTATTTATGAGTCTGGGAAGGCAGGGCAGTAAGCACAGTCTGTTTCAAGGTTCTGA  
GTTTTACCCCTGTGCTCTGATTGCGAGATCATTTTCTCTCTTCTCTGCTTCTTCACTTAGGACAAGAAC  
GTTTGGAAATGTTTCTACTACTTTGGACACCATAGTTTAGATTTCAAAATGAGTACAAGTGGGAGGAAAG  
CTTGGAATAATCTCTGGAATAATCGAACAGAGTGAAGGAGAGGGGTCTACAGGTGAGCTGAATGCTGCA  
TGGCATTGAAGTAATCACACAGTCTGCACAATTTCTCTCTCTTGTATGGTTATCTGTTGTCCGAGAAGG  
AACAAATTCAGAAAGTCTTTTCTGGACTGTAGAATAGCACTTGCTTATTGTAGAGCCCTGAGAAGCAT  
TACTGAAAGCGGTTTCTTGTCCCTGAGGTATTACAATGAGATGGTGGTCACTGATTTCTATGTTTTCC  
TTTATTGAGCTGTGTTGTTTGTATCCTTTGCCAGGTGCTTAAACAAATTTGGTTTTGTCAGATGGTAAGTT  
AGAGGTTGGACAAAAAAGGGATCATGTCACTGCCCTGGCCAAATTTCAACAGACTGGGGTCTAGTGAG  
GGCAAAATAGATAGAGGCTTTCTCTCTCACTTTGTGTTATTTAGAAAAAGAACTTTCCAGGACAAATTTCT  
TTTCTAGAAATCTTTTTTAAAAATTTTTTTCTTTGAAAATTTACTTAGATGCAAAATAATATATTTTT  
CTTCTTTTAAATAATAAAGTAAGATGTCTCTTGAGGTGGTGGTTGTCACTGACAAGATTAACTAGAA  
CTGACTAGCTGTAAAAATATAATTTGGGATGCATTATTAAGGCATGCCATTTTTATTTGTCATGCCATTGT  
GTACAGATGTGGTTGTGAAATAGTTCAAATCATGGCACATTGAATGTCTCACTGGATTTTAGGAATGT  
GTTCACTGAGACAGCCAAATCTATTTCTTTTCTTTGGCTCATTGCATTGGCTGTAAATGGAGATATT  
CACTTTAATATGTGAGTCAAAATTTATTTCCAAACATAAATCTGCAGTTGTTCTGTACAGAAATATAAAT  
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GGAAAGGTTTTTCCAGAAAGATTGTCATATGCCATAATCTACTGATGAATACTTTTTTGGGTTACTCTTT  
CATATTTTGGGAGATATAACTATGGAAGTGTAGGAATCATGGGTTCTGGAAATAGTTTTTATTACTGCTT  
CTGAAATGCCCTCCCAATGATACCATATAGTAATCCATCAGGGAATAATATTTTATTATAGTTTAAAA  
TATAACTTAATATTTAGGTGCTCTTGTTCAGTCATCGTCAAGTTCTTTTTATTTACCAACCCCTACCATG  
GCACCTCTGAAGACTGTGAATGCCAGACACCTGGATTATCATGGCTTTGCCATCTGTAGCCCAAGA  
GAACCTGAACAAGTGAAGTCACTTCTTGGAGTCTCATTCTGCTTCTGTAACATGGGAACTAGGGTAAT  
CTAACTCATGTGCTGTGATGATTAGATGAGGCAAAATGCTGAGTTCACCTAGCCAGCACCTGGTCCATG  
GGAAGCATGTGGGTTCTGCTGCTACCCAGTCTTGGCCAGTGCATGGTGACAGAGGGAATCTGAACA  
GGCCAACTTTATTTCTTATTTCTTACCACCCCATGTAGATGCTTCTACATCTTCAGCTTCTTCTCTCTC  
TTCTTTTTTTTTTAAAGGCAGGGTCTCACTCTGTCCCCAGGCTGAAGTGCAGTGGCACACACACAGCTC  
AGGGCAACCTCGACCTCTTAGGATCAAGTGTATCCTCCACCTCAGCCTCTGAGTAACGGGATGACAGG  
ACCACACTACCACACTTGGCTAATTTAAAAAATTTTGTAGAGCTGGGGTCTTGTATGTTGCCAGGCTG  
GTCTCAAACCTCTGGATTCAAGTGTGCCCTCACCTCAGCCTCCCAAGTGCCTGGAAACAGGCCTCCA

FIGURE 1, sheet 47 of 94

CACCCAGCCTTCAACTTCATTTTAAAAAATTGTGGTAACTATACAATTCCATCCATGAAAGCAGAAACCA  
CTTGTAACCCCAAAGCTATTGAAATTTAAAAATATATATATATAAAAAATAAAATTTGTGATAAGAT  
ATACATAATATGAAATTTACTACTTTAATCATTTTAAAGTGACGGTTCAAGTGGCATTGAGTACATTCAC  
ATTTTGTGCAACCGGAAGCTTTTCATCCTCCCAAAGTGAAGCTCTGTACTTATTTTTATTTATTTAT  
TTTTTGAGATGGAGTTTCACTCTAGTCGCCAGGCTGGAGTGCAGTGGTGAATCTCGGCTCACTGCAAC  
CTCTGCTTCTTGGGTTCAAGAGATTCCTCGCTCAGCCTCCCAAGTAGCTGGGATTACAGGTGCCACC  
ACCACACCCAGCTAAGTTTTTGTATTTTAGTAGAGACGGGTTTTGCTATGTTGGGCAGGCTGGTCTCT  
AACTCCTGATCTCAGGTGATCTGCCGCCCTCAGCCTCCCAAATGCTGGGATTACAGGCATGAGCCACTG  
TGCCCGGCCAGCTCTGTGCTCATTAAACAATGACTCCAAGTCCCTTCCCCACATCTCCTGCTGACCTC  
TCTTCTACTTTCTGCTCTGTGAGTTTAACTATTCTAGGTACGTCATGTAAGTGCATCTATGTGATATTT  
GTCCTTTTGTGCTGGCTTATTTCACTTAGCATAATGTCTTCATGATTCATTGTTGTAGCATGTGTC  
AGAGTTTCTTCTCTTTTAAAGGCTGAATAATACTCCACTGTATGGATAGACCACACTTTATTTATCCATT  
TGCTGTGATGGACATTTGGATGATTTCCATCTTGTGGGTATACAGTAATTTTGCTATGAACATGGG  
TATAAAAAATATCTATTTGAGTTTCTGCTTTCAATTATTTGGGTCTACACCTCAAAGCGGAATTGTTGGA  
AGTGGAAATGCTTTCCACTTGTGGAGTGGAACTGGTCTCCCACTTCATTTTGACACAACCTCCAAGC  
TTCAGAACTGTATTTACAACAGCGTGTGGGAGGTGCTTTGAGTTTATGACGGAAATCTCATATCAACA  
GGTTTTAAATTTGCTCATACGACTTCTTGCCACCCCTGTCCCAATTCAGATCTTTTTTTTGATTAAATGGT  
ATGAACAATTTTCAAAATATCCTGGCAACAATCTATTAGAATATTTGACTTTCTCCTCCTCCTCCTTTAG  
CCCTAACTATTGTGGCAAAGCTGTTGAAAACCTTCTCACATCTTCTCTGCTCATCTACTTTGCTACTC  
AAAGATGATTAGTAGATGTTTTGGTATGATTTTTTCTTGGCATAACTGTGAATACTTTTAATCCTTC  
ATGTTTTATGACAATCATACATTTCCCACTTTTGTGTAAAAACATTTTGAATCTTCTTTCTATAACAAAT  
TCTTTGCCAGTCTTCTTTTCTTTTGTCTTTAGTGAGTTCCAATGATATCATTTGTTGAACCTGTTTTT  
TAATCTATGCTTGTCTTCCATTTCCCACTTCCCTTTTGTCTTTGGTTACAGTAGATAATGTGGTGGTCTACC  
AAGACAAAGCATCACTCAGGAGTCAAGGGCTGGGGTAGATACAGACACTAGGTACTGCAGAAAGTCAATA  
TCTTTCTCAGAGTGAAGGCAGGACAGACTTCTGTTCCCTTGTACCGTTGTGGCTGGGGAGTTGGACTG  
TGCATTTATCCTTGTCTATATAAGTCAAAGTATTGCCAAATAACTTAATTTGGTGTGGTCTTAGTAAG  
TATTTGTCTGTGATGTTTAAATGAAGACAGTAACATTTGGGTGGCTGTGTTAATTCCTCACTTTTTT  
CTTTCTATACATGAGCTTCTAAGAAGCGGAACACTTGGTGGTCAAGAGTTCAGAGATTCCTTGCTAT  
GATTGCAATCTGAAAGTAGATACCATTTGAATGAAGAGCTTGCCCTTTGGAGAAGCTGGGCTTTCCA  
TATATGGAGGTTGTTAGAATGCATAAGAGTTCAAGCTTCTGGAATGAAAGGAGACCTTGGTTCAAAACCCA  
TCTGTAAGCTGTCTGTGCTGTGGCTTAAATCAGGCTTTTAACTCAATTATAATTTGCTATCTGTATAA  
TAGGATTAATATAATTCCTTCTCTATAAGTTCTTAGGGGTTAAATGAAACAATCAATGTATAACACAC  
TTCCTGGCATGTGATGTTCACTACCTAGAAGACTCGGTTTCTTGGTAGAGAGATATTGGCTAGACAA  
GCTTATGGAATTAACCCAGATAGGAAGTGAAGCACAAGTGTGAATGAACAAGCCAGAGCAGGAACGGCT  
CTTGAAGCGCTCACTCAGGCTGGGCTGGGAGTGTGTTTATATAACAGTCTTTGAAATTCACGTGCAG  
ATTCTTACTATTTTCCCAAATGTTACAGCTCAAACTATGTTGTCTGTACCTTAACACCTAAAGGATAAT  
ATAGTCTTTCACTGATAAACTAAAATGTATAGGTTTTCTTTGGCCAAATATGTATAGAACTTGTGA  
TTTCACATCAGATTTAAAGCTGATTTAACAATCTATGAAACATACTGATGCTTAGAAGTAGAAAGGAA  
TCGAGATTTTGTGATCTTGTCTCACTTAAATTAATTTATAGTTTCTGGATGCTTCAAAATGTGATAAA  
CCATAGTTAATTTATGTAAATATTCGATGAGTGCCTTTAATAAGGAGACTGTAAAGGTAGCCAAAGCTT  
ATATATGTTAGTACATTTATGGGTCAATCGGGTATAAAAAATAGGACTTCGAAATATAAATATATTTT  
GTCGGACTCCTCAATGAGGCTTTTTCGAGGATTAGCTAAAATTTGGCTCTTATTTGATGTGTGAGTGTCT  
TAAACATTTGAGAGATTCATTTTCTTTTGTAGAAATTCATTTTATTTCTGAGCCTTAAATATGAACAGTA  
GCTAAATGTTTGTATATGTTGATAAGGAATGCTAAGTGTATTCTTAAATGGGACGACACCTTTTCCCG  
GTTTACATAACTTGCCTTTTAACTAACCTTATGAAAGTCTCCTTGACTTTAATTTTTTTCAGAGTACT  
GTATATCTCTTTAGGGAATGCATTTATTTAAAAAATTATAAGCAAGAATAGATGTGATATATTTGAAG  
TTTTCTAGTCACAATTTAAATCCCTAGATGTGTTGTAGTTTGTGGAGCACTTTGAAATGTGCCAATTCAA  
GATGGAATAGCAGGAAGAACCATTCAAGTACGATTTCTGACTCCATAAAGTTAGGAAGTTATGATAAA  
GGAAAAATAACTACACCACATACTTATGGCACAGAATTGCATTATTGGGACAAATTGATCTTCAAATTTG  
TAGGCTATGATGGAAGCAAAATTTGTAGTATCTTAATATTCACTGTTAAGCCAGGAGACGAGTACTCT  
GAACCTCAGCTTCTCATAAAATCAGTCAGTTACATGACAGTTTATGATGTTTATATGTAAGAAACCTTT  
GATCAAGATATGCCTTTTCTCAGCCTTGTTAATACTTCAATTTATAAGGATTTTTATTCTAGGAAAAATA  
ATACCATAGACCTATTTTATTTAAAGCTAAAGTGTTCCTGGTGATGGTGGTGAATGGGAGATGATTCA  
AGGAACTGCTAATCTTGTAGAGTTTAGTAAAATCTTGAATAGAAATTTTAAAAAGTTAAACACACTA  
TGAAAAACAATCATTTATAGTAAAATGAACCATATTAATGTCTCCATAACCAACGTATTATAGCAGGG  
GAAAATGGCATTTTAATTCAGAAAAACATTTCTATATAAAACAAGCTTTGGAATAATTTGAATATGTTGA  
TTTTTCTTTGGGCAATCATGAAATACAGTCATATTAGGAAAGAGGCAAGGCCCTCAAACGGAAGAGTA  
GTGAGGATAATTCATGAGCAATGCTGGCTTCAAGAGCAGACTGCCCTGCTTAGAACCAAGCCTTGT  
GCTTTATGTTTCAATTTGCTTCAACCTCAGCTGAGTGAAGAGCAGACTGCCCTGCTTAGAACCAAGCCTTGT  
TCTTGTGGATTTGAGTTTTTGGGCTCCTGAGGTAGAATGGCCATCATATTGTTTCAAGGTCCTCACCCTTCCC  
ACTCATTACTTCTTTATAGAACCCTCAGTCATCCCTCAGGAGGCTCGCTCCACAAATGAAGTTGGG  
GGTGAGGGGAGCTTTAGCATCTCAGTATTGTTTCAAGATATTGGATCTTGTGAGCTCCACTATGTGTGTG  
AGAATGCGCTGGGCTCAGGATCAATAGCCATAAATGAGACAGATATGGCCATCCCTTGGCATGCCTAAA  
CTGATCTGGGCATTGAGACAAGCAGTTAAACCCCAACATAGTAAGTCTTATGATGAGACACAACTAAGC  
ATGGCTGGAAGGGCAGATAAGATTTACAGAGGAAGTGCATCTTGAAGTGGCAGACTTAGAAGATGAGTA  
GGAGTCAGTTGGGCAAGAGGAGAAAAAGTGTGTTCCATGAAGAAGAGAGCATGTGCCAAGTCTGGG  
GGTGAGAAGCATGGCATGTGTCAACAGAAAGACATGATCAGAGCTTGGATGGGAGTTAGAGCGGGGAGAG  
AAGGCAAGGAAAAACATAAGAGCTTTGCAAACTGTGAAGGCATTGCATTAGATGTCATTTTTAGAGCTT  
GGAGGAGCCTCAGGACATTGAGGCAGGATAGTGGCCTGATGGCTGATGTTTTAGGAAAAATCACTGTGG  
CCACCTGTGGGGAAGGATTGGCGGGGGAAGGCTGGAGGCAAGGGTCTGCGGTGGGCTGTGGTAATGA  
TCTGGGCTGGGAAGGATGGTGGTGCCAGCGCAAAATTTGGTTTCTGCTTTGAAAAATAATTAGAAAAATA

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TTTGTCTTGTATCTGTGTGCCTGTGGTGGGAGGTGGGGAGGGAGGGTCAAGTGAGGAAGGAGATTGAATCT  
AGAATAATGCCCATGTTTCAGGCTTCACGTGCAGACATTTCTTGGTTCAGCTGGGAAAGTGAATAGGAACA  
GACTGGCCGAGGAAAGAACAGCTCGTCAGTTCTGTCTGGGGCACATCCATCTTGACGAGTGTGAGAGAGT  
CAAGTCTTGATGCACAGGGCAGGTGGACATTCAGGAACTCAGGAAAGAGATTGATCTGAAGTGACCA  
CCAGAAATACGTGACGGAAGAGGTGACAAAAGGAGAGACCTGCAATATATATTTGGCTTTCTCTCAGG  
CAACTGCTTGGCCTGTCTTTATATTCCTTTTGAATCTCTGCATATGTACGGGCCATTATTTATTTTCACA  
ACTAACAATGCAGACTTCTGTGTATGACAACAAAGCCAAACAGCTGCTACCAAAGGAGGGGAAATC  
AGAAGAGAAGGAAAAAGAACAGGGAAGCTTGGGAAAAGCTGAATGTGGGTCTTCTGTGTGCTGCAGGG  
GCTGGGGTGGGCCCCGTGATTCTACTGAGAGGCGTTTTCTCTCCCCGCTTCTGTCTTTCTGGTTCCAT  
CTCATTACCTCCTGTCCCCCTCCACTTCCCTGCCAGTCAAACCTTAGATTCTCCAGAGGCTTTTTATTTT  
TATCTTTTGTATGGGCAAGAAATAGTGGGATTATTTTCCAAACCTTACCTGAACATCACATCGTGGC  
TTTGGCCCTATGGGCTTGGTTCATCCGGCCCTGCACAGAAGGACTTTTGGGCCAGTCTGGTCACATACA  
TCGAGTCTCTGTCTTTTCTAGTTAAAAAAAACACACACACACACTGCTATGTTTTCACTAAGACAACCTGG  
TGTGAGTTGTTTTTTAGAAAATCAACTCTACTTCAGTAAGATTTTCTCAAGCATTATCTTGAGAAGACCA  
GATAAATAAATTTAAAGAAATTTCTCTCTTTTCTTTTATATATCTTAAAGTTTGGGTACATGTGCAC  
ATTGTGCAGGTTAGTTACATATGTATACATGTGCCATGCTGGTGAGCTGCACCCACTAACTCGTCATCTA  
GCATTAGGTATATCTCCCGATGCTATCTTAATGCAACTTAAATCAATTGCTTTAATAACACATATTGACC  
AAGTTACACTCATTAAAGGAAAAAACTACTTTGTGTGTTTTCTTCTTCTGACGTGAGCTGAAGACTTAG  
AAATAGTTGTTTAAATGTTTGGTTAATAAGAATTTGTTTTTATATCTTAAAGTTTGGGTACATGTGCAC  
AACTTTTCTTTTGTGAGTTTATCAATTCTAGCTTTGTGCACAAAAGGTTTGGCGTATGAACATGATTCTG  
TTGTACATCTATTTCCATTTTGTTAAGAGACGAATTCATTTGTAATAATCTAGTACCTTTTATTCATTA  
AACATGTTAGTTCAGGAATTTCACTTGGTCTACAAAAGATACATATCTACAGTGGATGGCCAGTGCAAC  
ATGAGACTCAGCTCAAGTCTGGTCTGCAGCCAACTCAGTTCTCTCTGCTTCTTCTGGCTTACAAAGTAAC  
GCTCTGGGAGAAAAGTGAAGTCAAGTAATATTTGGTTTGAATGGTTATTGACTATTTCTTCTGAACTT  
AATGTATACTAATAATTTTTTATTTTATTTCTTTTTTTTTTAGAGATAGGGTCTCGCTCTGTTGTGCCATG  
CTGGAGTGCAGTGGTGTATCACAGCTCAGTGCAGCCTTGACCTCCTGGGCTCAAGCGATTCTCCTGTCT  
CAGCCTCCCGAGTATAGGATTACAGGCAATGTCAGCATGTGCCATCATGCCAGGCTAATATTTATTTTCT  
GTAGAGACAAGATATTGTTATGTTGCCAGGCTGGTCTAAAACCTCCTGGTCTCAAACATCTCTCCACCT  
CAGCTTCTCTGAAGTACTGGAATTTATAGGCATGAGCTGCCACACTGGCCATATACTCATTTTTTGTAAA  
AGCTGAAATATATCAGCATATACTGCATAAATACCACAGGAGACTAAACACTGAAAGTTTCTTTAGGGTA  
TCAGAGAATAACACTTTTTGCTTGCAGTTAGCATCTGCACAGATAAGTTTGTGTTTCTGGTCTATTACTT  
CTTCAGTTTGACCCCTATTAATAAGGACAATTTCTAAAATAAATAACTGTGTCTGGATATCTGAATCCGTGT  
GTGGTCTTTTACTGAAGTTACAGGTTTATAACTCTGCTGACTAGTTTGTGGTCTGTTGTATGCAATAGA  
AGAGTGCAAAATGTTAATTTGATCTGAAGCCCGTGTATACAGTGACTTTTATAATGTATATTTAAAGATGG  
AAAGCCAAGTTTTATGAGGCCAGCATTTCTGTCAAGTCCCTCAGCTCCACCTCTTCTAATTTGGGCTGAC  
CCTTAAGTTGAATAAAGAACAAAGAGCTCTGTAGTTAAAACATTTCACTGCATGTTGCATCTTGCCCTTA  
GTAATGGAATAAAGATAGAGACTTAAGCAGAGAATCTGAAGTGGGTGTGAAATATATATTCAGTTTGG  
GGTGGGAGAATGAGAACCATGTTTTACATAGTATACATAACTTCTTAGTCTAAATTCAGGACATTTCC  
CCAGATATGTGAAGATTTAGACTTATGCAGACAGACTTTATAAAAACATGCCAATATTTATTAGTTTGT  
GAATTTTAAATATCTGCTCCCTATAAACACAGATTTATTTTGGGGATAAAGGGATGGAGGTGACTTCTAA  
ATCTTAGAGCAGAACTTCCCTGTGGGAGCTGGACATATGTACCAGGAGCTCAGAGAAGAGGGTTGTGTT  
GGGAGCGTACATCTGAGTGATCTGCATTTGGTGATGATGGAAGCCATGGACATGCACTAGATTGTCTTG  
TGGGCAATATGAGTATGAGTAAGAGAAGAACAGCTAGGATTGAGCCCTGAGCAGCTGAGCTTAAATGT  
TGGATGGAGGAATGAACTGTAAACAATACCGGGAGGCTGCAGCCTGAGAGGCAGAAGGAAGTGGGGT  
GTTTGGGATTATGGAAGCAAGGGAAGGCTGTCTCACAGCGGGAAGGAGGTATCAACATTGTAAGC  
TGCTTCAGATAGGTTATGTAGGATGTGGACTGAAAAATACCTGTAATAATTTGGCAACCGGATTCTTGGT  
AATCTTAGGTAAGTTGCTTTTTTGGGGTAACTAAGGTGGAAGAACAGATTGTTGTTGGGTTGAGCAATGCA  
GAGAGGTGAAGAAAAGGAGATTTCATGTGCAGACGTTTCTGAGTTGAGCTGGGAACAAGGGATAAGATAG  
AAGATGGAAGTTAGAGAGCATGTGGGGCAAGGAGACTCTTTTATGGGACAGTCTCGCATGTGATCAAG  
CCAATGAGTAAGGAGCATTTGAGGGAGAGAGAGTCAATCAACAAGAGAGAAAAGAAAGAGGGTTTCATCAT  
AAAATAACGCTTAACAACAACAGACATCTTTTGAAGTGTCTTCTATATCCGGGGAAGTATGTTAAACTCCTA  
ACCTGCATTCTCACATTCAATTCTTAGAATCGTTGGATGTGGTGGGTCCATGATTTCTCTAGATTAGC  
GAGGAGGAAAGAGAGATCTAGAAATGTCAGGTAGCTTGTCTCAGAGTTCTCCAGGTAGTCAGTCATGGACT  
AATTTGTGAAGTGAAGGACTGAAGTTCGTCCACCCAGCCACCAAGCCGGCTTGACTTTAGGTATTCT  
GTGCTGCATGTGAGTACGACCTTAAATTTATATTTTAAAGAGGGCTACTTTGAAACTCTCTCTGAAAAAC  
TCTATTTCTAAAAGCTCTACCCCTCACAACAATTTTGGCAAGCAGTCTTGGTAAAACCAAACCAACCAAA  
CCAAACCAAAAAACCTTATCTGCTGAGAAAAATATAACCACATAAAATATGTTGTACAAAATATAGACT  
GTGTGAAGTGAAGGTGACTTGCCCAAAGGACTCCTGAAGCAATTGGCTGCTGTAGAAATTAAGTCCACGG  
GAGGTTTTTTTCTGTTTTTTTTTTTTTTTTTTTTTGGAGATGGATTCTCACTCTGTGCTTAGGCTGGAGT  
GCAGTGGCGCAATCTCGGCTCACTGCAACCTCCGCTCCCGGGTTCAAGCGATTCTCCTGCCTCAGCTTC  
CTGAGTAGCTGGGATTACAGGTGTACACCACCATACCCAGGTTTTTTTTGTATTTTGTAGTAGAGCGGGG  
TTTCACCATGTTGGTCAAGGCTGGTCTTGAAGTCTGACGCTGATCCACCTGCCTCGGCTCCCAAAGT  
TCTGGGATTGACGATGAGCCACCTGCCCCGCCCCATGAGAGGTTTTGTTGCACTTCAAGAAGGACAG  
AAAAAGGCAGGCAGGCTGGGGAGCAACATAGTAAGGCTGAGGAAGTGATAGGAAAACAGCCTCCAAAAGG  
TTTCCCTGTAGATTCTGACTGGCTAAGTTTCTGAAATAATTAATTTCTGCTCTTGTCTTTTAAATAGG  
ACATAACGACTATATGTGTCCAGCCACCAACAGTGCACCATTTGATAAAAACAGGAGGAAGAGCTGCCAG  
GCCTGCCGCTCCGTAAGTGTACGAAGTGGGAATGATGAAAGGTGGTAGGTACATCTCTCCAGGGGCC  
CTTGGGGATGGCCCTGGCCACCGCCAGTGTGGCTCTACCCATTGGAATAACACCATGGGAATTTGTG  
TTTTTTCTTTTAAATGTTTTTTTTTCTATTCTTATTTTCTTTGCAACAAAAGTATTTTCATAATCCATT  
TTATTTTAAAAGGTGGAAGTGTCTGGAAGTGGAAATTTCTAACATGGCATTTTGTGTTTTGGATTTTCAA  
TGTAATAATATATTTTAAATCAAAGGTGTGTGGGAGCGGTGATGGAAGGAAACGAAGAGTGCCTTAGT

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AATAATTATCTAGAAATATTTTCAGTTACTGTTTATGTTGCAAATGCTAGAAAATGATATCTGAGGATAA  
 ACTTTTCCCTAAATTGAGACTTGTAAATGTGAAAGGCTGAGTAGCTAATTTATGACCTTCCAGCTGTTATC  
 ATCCCTTAAAGGAATGTGAATTTCAATCAAAAGGCGAGTTTCTCCTTTAGAACCTGAGTGACACCGCACT  
 TTCTTAACCTCAGTGTCTAGCATGGTGTGGCATAGTTGATTACTGAGCACTACACTAACAGTGTGAGA  
 GCATGCATGTTTTGTGACTGTGGGTTTTGTGTTTTTGTGGTCTTTGTGGCTGTGTGTGTGTGTGGTTTTCT  
 GTCTTCTCATGTATCCGATCTTCCAGTTTTTGTGCATACAGGAATCTGGAACCTGAATCCCGAGTTTGGGAA  
 TATTAGGAGCCCCATAAATGTGGTGGCTGAGTTGACCTCATTGTATTTCTGGGAGTCTCATCTTGGGAA  
 CATTGGTCTTACTGTCTGGATAGCCTTCAGTGTAGTGGAGAGAACAGTAGAAAATGTGAATTAATAA  
 AAGTCATGAGGCTGAGGTGGGCAGATCATCTGAGGTGAGGAGTTCGAGACCAGCTTGGCCAACAAGGTGA  
 AACCTGTGTCTTATGTGAAAATCAAAAAATAGCTGGGTATGGTGGCGAGTGGCAGTAGGCCCAAGCTACTT  
 GGGAGTGGAGGCGAGGAGAATCACTTGAACCTGGCAGGTGGAGGGGCGAGTGAACGTGAGATGGCGCCACT  
 GCACTCCAGCTGGGTGATAGATGAGACTCTGTCTCAATAAATAAATAAATAAATAAATAAATAAATAA  
 ATAAATAAATAAATAAAGTAACGGATTCATTTAGTGTTCAGAAGGATACTGAAGGGAGGGAAGGGCTGA  
 TGATGTGTCTACCTGCTGATTGTAATAGGGAAAAGCCCGTTCTTTCTGGAAGGAGGTGAAGCTTGGGGT  
 GATTTAAGGAGAACAAATTTCAATGAAGAAAGTAATGATTTTGCAAAATGTGGCGAGCTAACCTTTAA  
 CATCTCTTACTGGGACGCGAGGAGGAAGAGGAGGAAAGCAAGAATGAGATTTATGATGAAGACAAGCT  
 TGATTGTTAACAAAGCTTACAGTGACAGGTTTCATAGTCCCGGGGTCTAAATACGCCAGACAGGTTGAGG  
 TTTGGAATGCAGCATTTTGGAATAAATTTCTCTGTGTGAAGAGATGCAATGTTGAATTTACGCATTCTGTGA  
 GCTGTGACTATGACATATACATCTTGAACATCTGAAAAGCAGCTTTAATTCAAAGAGTAATTAATTCCAA  
 GAATTTAACAGCTACATCTGAAATGACACTTGAGTCAATGATGATAAATTTAAGGAATTCATCTTT  
 CTTTGTACTGTTGGAGAATTAGTCAGGCTTAATTAACCTACAAAATGCGTCTTAAAGTAACTTGGTAAG  
 TGACGGAATATATAACAGTGCATAGAAAAGCTTTATTTGAAACAGTGGCTGAGGTTTAATATTTCTTC  
 TTTGGCGATTATATGTAGTTTAAAGCAGGCTCTTCCATGACTTCTCGTTGAAAGCTGAAATTAACAGT  
 CATGAATATGTCCAAAACAAATTTTAAATGTGAGGGTGACCATGCATTGACCCCATTTCTATAAAACCG  
 ATTCTGTTTTTTTTTTTGTAAATTAATATCCAGATACGGTCTGGCTGCATGAATATAAATTACGCATTCTC  
 ATTTTAAATCTAACAAAAATTCATATATGCAAAAGCATATAAAAGCTCTCCCACTGTTTCTCTCTAGGA  
 ACTGTAGATAATTTGACTGTACACAACAGACTGTGGATGGCTCCATACACACTTGCACATGTATATTGATG  
 ATCTGAAAATATATGCTGTATTAGTTTCTTAGGCTGCCAATGAATACACAGCTGGTGGTCTT  
 AACACGGAATTAATTTTCTCCCAATTTCTGGAAGCTGGACATGCATAATCAAAGTGTGGAATATTTGG  
 TTTCTAGTGAGCCCTCCCTTTTTTTTTTGTAGAGATGAGATCTTGCTCTGTTGGCCAGGATGGAGTGCA  
 GTGGCACTATCTCAGCTCACTGAACCTTCACTCCGAGTTCCAGCGATTCTCCTGCTCAACTTCCCA  
 AGTAGCTGGGACTCAGGTTGTGCCACATACCCAGCTAATTTTGTGTTTTTTTTTTTGTAGAGACG  
 GAGTTTCACTCTATGTTGGCCAGGCTGGTCTTGAACCTTTGACCTCAGGTGATCCGCCACCTCGGCTTC  
 CTAAAGTGCTGGGATTTATAGGCTGACAGCAACCTGCCCCGCTGTGAGGCTCTCTCTTAGGCTTGTGGC  
 TAGCGCTCTCTGCTGTGCTTACATAGGCCCTTCTCTGCTGCGTCCGAGCACTCTTGGTATCTCTTTCT  
 TTCTCAAGGCGCTGTGGAATAGGAGTCCACCTTATGACCTCATTTAACCTAGTTACCGGCAAAAG  
 GCCCTATTTCCAATATAGTCATACCAGGGGCTAGGGCTTCAACATACAAGTTTTGTGGGACACAGTTT  
 ATAACAGGCTGCCCTCCCAAATACCATAGACTGGGTGCTTAAGTAAACGGAAGTCAATTGCTCATAGC  
 TCTGGAGGCTGAAGTCTGAGACTAAGGTGTGGCAGGTTGATTTTCCCGAGGCTCTCTCCTTGCTT  
 GAAGATGGCTGAGTCTCTCTGTGTGCCACATGGCTTTTCTCGGGCATCCACAGCTTCTCTCTCTCT  
 TTACGAAGACACCCAGTCATATCGGATTAGGGCCCCACACAGGACCTCATTGAATCTTAATCACCTCAC  
 TTAAGGTACAATTTCCAATATAGCTACATTTGAGGCCGAGGGGTGAAGATTTCAACATATGAGTTTAA  
 AGGTTACAAATTCAGTATGTGGCAATTTCCATAGGGGTTACTCAGTGATTTGTTAGTATTTTACA  
 GTGAAGGAAAACATGTATCTTCTGCGAGTTTTATGTATGACATAAGTTTTAAATGAAGCTTTAAATCA  
 TAAAATTATAGCCGCTGAGAACATCTTATTTAATGATATGTATAAAGTACTTGCCATAAATCAATATAA  
 TTTATTTGATTTTCTACAACATGGAATACACACATGGCCACAGGATACCCCTATAACAACCTCTTTGAA  
 AAATCCCATTTGAATAAGGCTTAAATTTACAACCTGGAAGTACATGATAACTTAACATAAATTTGAGCT  
 ACATGCGAAAGGCGAGCTGTGACTGAATAAATCTTTACAACATGTTTTCAACATTAGGGTTCAACAA  
 TCCACTTTCTTAACAGGCTGGTTACCAACTAGGATATTGAACTCTACCTATGAAATAAAAGTTTAGT  
 TTCAGTTAAAGAGAACACAGCTACTCCCTATTTTTCATGCAAGGCTGAAAAATTCAGTGAAGATC  
 TATTGTTAAAGACTCCAAAGAGTGCATGATTGTCTCCATGAACATAACATTTAATCTGTTATAATACT  
 ACTGCTCTGAAAAATCCAGCATCATATTAGATTTGGTTCTGAATCATGGTGGTTCTATAAGATCGAGG  
 ATTTGAATTGCACTTTCCGGAATGTGCTTTTCTATCCTAGTACATGTGCTGGTTTCTCTGCATTGCTTTT  
 TCTCTCTCATTTGTCTCTTCTCTTGAACCTTAGGTTGATGATACATGCTCTCTCTTCAGGAAGGCT  
 ACACAGTTACTTGACAGTCTCTGAGGCTCGAAGTCAAAATCAAGGTGCTGGAAAATTCATGTTCTAGCT  
 TTAATTGGCAACAGCTCTTCTCTTAGCTCTTATCACCATTATTTAGTCAATTCAGTCAATGCTGTCTTACA  
 TATGGTCCATAAATCCATGATGGCGCGGGGTGGGGGTCTCTGTGCTTGTGTTACCGATCTTGCATGA  
 AACAAAGTCACAAAGTAGGCTGTCAAGAATGATTTTTTGCACATTAATGAATGATTAATTCATTATA  
 AATAGTTATTATTGTGTAGGGCTCTTATATGATCAAAACCTTGGGAATAAGAAATGAATTAAGATTGTAG  
 TCCCTTCCCTCAATGCTCTCACAGTATAAAGAGAACATTTGCAATGGGAAGCGCAAAATAAAATCTCAAC  
 GGCAAGTGGAGACTGGGTTGCAAGATGGCTCAAAATATTGAATGATCAGAATGGGAGTCTAGAGCTTTAAA  
 CAACCACTCCGAGGTTTTTGCCAATCAGAGTATTACTCAGACACCTGCGCAACCAAGCTGAACCTCGT  
 CTCACAAATATAGCCAGGTGTGATGGCAGAAAGCTGTAAATCCAGCTACTCAGGAGGAGGAGGACGAGG  
 AATCACTTGAACCCAGTAGGCACAGGTTGCAGTGAGCCGAGATTGCACCCTGATTTCCAGCTGCGGCAA  
 CAGAGTGAGACTCTGTCTCAAAAAATAAATATAAATAAACAAATAAATAAATTTTACTTAATGAGTTTGA  
 TCAATGAAGATGACAAATCGTAACGTGGGAAATATAAATCTAAAGTGCCACACAAGTGTAGCTATTACA  
 TATCTTTTTTGTCTTAAAAATAATTACTACTTAGTTAAAAATTTTCATCATATACGACAGCTGCTGGGTG

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TTTTTTTTTCAGCTGAAAGAAAGAGAATGGCAATTTTCATCACTTCTACAAGATATAAAATTTCTAATTTCTT  
 TGTGGAGAATAAAACCTGGCTTAAACACCTAAGCTTTTTTTCTTTTCTGATCTCATATGCTGAATATA  
 GCTGAATGACAAGTGAGATGTGTTATTTATCATTTTATGATGCCAGAGATTTACACGAATTTGTGAAAGG  
 TTTTTTCTTACCATAGATTGAGAGCGGTGTTTGGAGCAAGTTTTTCATTGTGCAGTGAGGAAATGGGCAC  
 ATAGAAATCAATTTGATGTGCAGGACTCTTGGACTGACTATTCTGGTTATGTTTCTTATAACACATTAA  
 AAGAAATTTGAGATAAAGTAGTAATTGTCAACTAGTCTTTATTTATTTAATAACAAATGTTGCAGTATA  
 ATTTTTAGAAATATTCCAAAATAACAAATAAATCCAAAATTAACGGGATAATTTTAAAGTGAGAAAATA  
 ACATACTACTAATATAGACAGGGAATATACATGTGTCCAGAATGATTGAGAAGCCCAATGAAACACTGG  
 AAAATAAAATATTTTCTGTTGCTTGGGTTTAAATTTATCACTATGAGTTATCGTAATTTGCTTTATG  
 ATGGATAAACTCCCAACCTGGGGACTGCGATTGGAATCCTCTTTAATCCTACATTGGCTATCCTTTATCA  
 AAAGTAAACAACCGGCTGGCCATGGTGGCTCACACCTGTAATCCAGCATTTTGGGAGGCCGAGCGGGGT  
 GGATCACCTGAGATCAGGAGTTTGGAGCCAGCCTGACCAACATGGTATAACCTCGTCTCTACTAAGGATA  
 CAAAAATTAGCTGGGTGTAGTTGTGCCACCTGTAATCCAGCTATTTGGGAGCCTGAGGCAGGAGAAAT  
 GCTTGAACCTCAGGAGACGGAGGTTGCAGTAGGCCAAAATCACACCACTGCACCTCCAGCCTGGGTGACGGA  
 ATGAGACTCCATCTCAAAAAAATAAAGTATACAACCAATTATTAATGTTTATGATGGTGAATCA  
 AATTAATAAATTAATAATGTAGATGTGAATTACTTTTTTTGGATTGCCGAATAATGTGGAAGATTTGTA  
 GCTGCAATGTGAATCCAAGTTTCTCAAAAGGTAGGTTGGGGTGTCTTATTTAGGATTGAATTTAAGAAA  
 AATGTTAAAGAAAGCTAGCTGCTCTTTACCAAAGAGAGACTGGTTGTTTTAAGCAGTAATCTAATCTAT  
 ATATTTATGATTTGAACTATTATTTTATTAATTCATATAATAGATATTTATTAATAAATCCCATATT  
 ATAATTTTTTATTTGCAACAAATATACTGAATCAAGTAAGTGAATCACATATGGACCTTAAAGACTAAT  
 GAATCCAATGTTTGACAGTATTTTATATCAATCAAGCTCTGGTTTCCACAAGCAGAAGCAGATCGTCATC  
 TATGAAACAGATAAAAGTTGATTGGCATACCCTCTCTTTATTCATTATGATGTTTCATGAGAAACCTTCT  
 TAGAACCTTAGGCTCAGGCTCAGGAAACAGATTTGCAAGCCACTGATCTAATCTAATCTTCTATCTCTAGG  
 TATGAAATCAAGGCCCTCCATTACCTATTAGGGATGAAGGCAGGTCAGCCTCTGTGACTGTGCTGATTCAG  
 CTGGAGGAGCATGAGTGTAGGCAGCACAACATCCCTATAAGGACCATGTTCTTAAGCTGGTTTTTTTT  
 TTCTCTAGTAGTTTTTACAGTTTTCAGGCTCTAATTTAAGTCTTTAATCCAGGTTGAGTTGATTTTTGTAT  
 ACCGGATTAAATGAAATTTCTTCTGATTGTTTTCGGTGTGTAGATATCCAGTTTCTCTAGAAACATTTATC  
 AAAGAACTGTCCTTTCTCCATTGTGTGCTTTTAGCAGCTTTGTCAAAAATTAATGGCTCTAAATGAAT  
 GAATTTATTTCTGGGTTCTCTATTCTGTTCCATTGGTCAATACATGCTGTTTTAATTACTATAGCTTTAT  
 AGTATATTTTGAAGTGTAGTGTGTATGCCCTCTAGCTTTGTTCTTCTAGCTCCAGATTGTTTTGGCTATT  
 CAGGGTTTTTTTGTGGTTCCATACAAATTTTGGATTGTTTTTCCATTTTGTAAAAATGTCATTGCAAA  
 TTTTGATAGGCATTGCATTGAATCTGTAGATTGATTGTGTCTATATGGATATTTTAAACAATATTAATTC  
 TTCCAGTCTATGTATGTATATCTTTCCATTATTTGTGTCTTCTTCAGTTTCTTTATGATGTCTATA  
 GCTTTTAGCATACAATTTCTTCTCCTTGGTTAAATTTATCCCAATATTTTGTTTTTATTTTATAG  
 CTATTATAAATGAAATTTCTTCTGATTGTTTCTTTTGGATAGTTTGTGTTAGTGTATAGAAACACTAC  
 TGATTTCTGTATGTTGATTCTTCTCTGAACTTTACTGAATTTGTTTATAGTTCTAATAGTTTTTTG  
 TGTGGAGTCTATCTTACATGATCTATGTGTAAGATCATGTCATCAGCAACACGGGCAATTTAAGCTTCT  
 TCTTTTTCAATTTGCATGCCTTTATTTTTTTCTTGCATAATGCTCTGGCAGGAACCTCAGTACTATG  
 TTGAATAGAAGTTGGTGAGAGTGGGCATCCTTGTCTTGTATTGATCTTAGGGGAAGACTTTTCAAAATTT  
 CACCATTGAGTATGATGTTAGCTGTAGGCTTGTCTATATATGGCCTTTATTGTGTTGAGGTACACTCTTTC  
 TATATTTAATTTGTTGAGAGTTTTTGTATATGAAAGGATTTTGAATTTTGTCAAAATGCATTTTTCTCTA  
 TTGAGATGATTGTATGTTTTTGTCTTCTGTTAATGTGTGTAACCATAGTTATAGATTGTCATATG  
 TTAACCATTTGAGTATGTTTTTGTCTTCTGTTAATGTGTGTAACCATAGTTATAGATTGTCATATG  
 AATCAATTTTGTAGTATTTTGTGTGGATTTTGTCTATATATTCATCAGGGATATTGGCATGACATTT  
 AATTTTCTGTATATACCTTGTCTGGCTTTAGTATCACAGTAATGCTGGCCTTGTAAATGAGTTTGGAA  
 GTATTCCTCTCTTCAATTTTTTGGGAAGAGTTTGGAGATTGGTATTAGTTCTTTAAATATTTGGTAGAG  
 TTCAGAGTCAAGGCCATTAGGTCTGGGCTTTTCTCCATAGAGGACTTTTATGCTGCTAGTTCACTCT  
 CTTTCTAGCTATTGGTCTGGTCTGAGCTTTCTATTTCTTCTATGATTGAGCTTGTAGGTTTATGTGTCTA  
 AGACTTTATCCATTTATCCAAAGTTATCCAAAGTTGTGGTGTGTAATTCATCATAGTACTCTTATAATTT  
 TTGCAATTTCTGTGCTATCAGTTGTAATGTCTCCTCTTTATTTCTGATTTCAGTTTATTTGTGTCTTCTC  
 ACTTTTTTCTTGTAGTCTAGTTAAAGGTTAATCAATTTTGTATTCTTTTTAAAAACAAATTCGATGTTT  
 ACTGATCTTTTGTGTTTGTGTTTTAGTCTCAATTTTATTTTATTTTCTCCGATCTTTATTTTCTTCT  
 CTCTACTAAGTTGGGGCTAGTTTATTTTATTTTCTAGTTATTTGTGGTATAACATTAGATTGTTTTG  
 AGATCTTCTTCTTTGATGAAGACATTTATGCTATAAACTTCCCTCTTGAATAACTCTTGTGTCATCCC  
 ACAAAATTTGTGATGTTGTGTCCATTTTCAATTTTGTGTTTCAAGATATTTTCAACTTTTCTTTTTATTT  
 TTCTTTGACCCACTGGTTGGTCTGAGTATGTTGTTTTATTTCAAGTATTTGTGAATTTTCCAAAATTA  
 TTCTTGTGATTATAGTTTCAATATTTATGTTGGTGGAAAAAATACTTGATATGGTGTCAATGTTCTTA  
 AATTTATTAAGACTATTTTGTGTCCPAACATATGAATACTGTTTTTTTTTCTTTTTTTTTTTTGGAG  
 ACAGAGTCAAGCTGTGTTGCCAGGCTGGAGTGCACTGGCTCAATCTGGTTGACTGCAACCTCCGCTC  
 CTGGGTTCAAGCTATTCTCATACCTCAGCCTCCCGAGCAGCTGGGAATACAGGAGCACACCGCCATGCCT  
 GGCTAACCTTTTGTATTTTTAGTAGAGATGGGGTTTACCATTGGGTGAGGCTGCTCTCAAACTCCTG  
 ACTTCAATGATCTGCCACCTTAGCCTCCCAAGTGCTGGGATTACAGGAGTGAGCCACCGTGCCAGGC  
 CATGATCTACTGTTTATCTAACAATTCAGTGGATAATGTTCAATGTTGATTGAGAAGAATGTGTGTT  
 CTGTTGCTGTGGATGAAATATCTGTATGTATCTGTTAAGTCCATCTGTGCTAAAGTATAGTTTAAAGTT  
 TGAACCTTTCATTATTGATTTTCTGTCCGAATAATCTGTCCATTGCTAAAGTGGGGTACTGAGTTCCCCA  
 ATATTTTGTATTACAGTCTATCTTCCCTTTCATATCAATTAATATTTGTTTCATTCAATTAGGTACTCC  
 AATGTTGGGTGCATATGTATGTTACCTGTATATCTTCAATGAATGACCCCTTGTGCTATTATTAA  
 TGGCCTTCTTGTCTTATTTTATAGTTTGTGACTTAAAGCCTATTTTATTTGATATAAATATAGCTGTCT  
 CTGCTTTCTTTTGGCTTCTATTTTCATAGAATGCCTTTTTTGGTCCCTTCGCCTTCAATCTCTGTGTTT  
 CTTAACCATGCATTGAATCTCTTCTAGACATCATATAACAGGGTCTGTTTTTTTAAATCCATTTACTCA  
 CTGATCTCTTTCTTCTATCTTGTCTCTTCTTGTGATTAGGCGATTTTCTATAGTGGTATCCTTTG

FIGURE 1, sheet 51 of 94

AATTCCTTACTTTTTGCCTTTTGTATATTTGCTACAGGATTTTGCTTTGTGATTACCATAAGGCTTACATA  
 AAAGATCTTATAGTTATACCAGGCTATGTTCAACTGTTTATAACATAACTTTGATTAAATTTTTTAATACT  
 CAATTTATTTGATTGCTTATTTAGAGATAATTTTGATTCCCTATCAGAAGAAAAGCTGAGGTATCTTTATGT  
 ACCTTTTCAGGAATGACCACGCTCACCTTACCTTGAATGTTACAAGAAATGCTGGCAGTGACTCAAGGC  
 CAGGCAAAAATTCAGAAAGGGTTTATCTTGTGTTGTACAATTTTCTTTTGCAAAAATAAATGATTCTTGA  
 TAGATGTAAGGACTTTTTCCGTAGATAGAACCTATAAAATGCAGAACTTTGGGGCAGTAATTATATGAA  
 TGAATTTGCTACTTTAAATTTCTGTAAGTCCCCAGGAATTTCCATATGCTTTTTTTTGTGTTTTCAGTGG  
 TTGTGATCAGGCTAATGGGTAGTTTTTAGAGCTGAAAAGAACTTAAAGATCATCTAGTGACCTTTTTGT  
 TTTTCAGTTGGATTGTTCTTGCCAAATCACTAAGCTAAGTTAACTGCTCAGACAGGAAACCAAGTCTCC  
 TGACCCATGGTTAATGCTCCTTTCATTGTTATGCGTCTGCTGGCTGACCTGTTAGTAACATAAAGTGT  
 CATGAGAGATAGACATATGCATGAGTAAGATATTAATATCCCATAAACCAAACTGTGACTTAGGAAATG  
 TTACGGTGGGCACAGGATATTACTCCTCTTCAACAAAACATCAATCATATGTTGGCTTAGTTGCACAGC  
 AGAAGTACCAAAAATAAATTTATATAGACGGTGTACAGATACTTTAAAAAGACCTACTTAAGATTAAAT  
 ACCTAATATTATTTAATATTAAATATAATTTAAAAGGGGCATTTTTATCTTTAGCCAAGGTTTAAATG  
 TTTTATAGATAATTTCTATTTTGAAGCTGATTTTTGTTTTTAAATGCCCATTTCTGGTATATAAAAAACATC  
 ATTTTGTCAAATAGGAGTCCCAGCTAAGGGCCAAGCGTGCAATTAACCTTGACTCTTTACCTACTACCTA  
 GGAACCTTGGGCAGATCACATACTTTTTCTTCACTCAGTTTTTACTTCTGAAAAATGCCAGCTGAAGTAT  
 GTTTCAAATCTTAAATTTTATGTTTTATGATCTAAGTTAGATTAACAATGGAATGGTTAGAATCCAAAG  
 CATAAGGTAGATATACAAAGTATATTTGGGGGTTGGGAGCAACTGCCGAGCTATCATATTTAGATTTT  
 AAGCTCAATTTAGAACAACTGCGGGCAACTGTAAAAACCGGTAGGAATGGGCAGAGTTATTGCTTCACT  
 AGTCATTGTTGGAAGTGAACTCTTCTGAATGGAGAGTCACAAAAATGAGTTTGTGCTTTCATGATAGT  
 GAAATGAGAAGATGGCCATATATTGCTATAAATCACCAGCAACATAAAAGAAAAAATTCAAAAATCAAGT  
 TTGTTGAGGCAGGACTCTGAAAAGATAAAGCTTTTCTTTTCTGTTAGAGATGTAATAA  
 TCATGACTAAGACTGGAATCCCAAGAGCTGGTGAGACTTTCTAGTTTCTGCCTTGTGAAAGAGAAAGGA  
 AGAGGCCAAAAAGATAATGAATTTTGGAAAGTTCTGATTAAATATCGCATAGGCTAGTCTGGTTATGT  
 CTGCTTGAAAACCTTATCCAGTAGGTATAAACCAACACACTTGAGGCCAGTCTTTTTGGAATACAGAAA  
 TATATGTAGCTTAAAGTAAAGACATCCTATGATGAAGAGCAGAGGAGTTGTTTATAAGAAATGTTCTCAT  
 TGGCTGGGCATGATGGCTCACGCCCTGTAATCCAGCACTTTGGGAGGCCGAGCTGGGTGGATCACTTGAG  
 ATCAGAAGTTCAGAGCAGCCTGGCTAACATGGTGAACCCCGTCTCTACTAAAAATATAAAAAAATTAG  
 CCGGGCATGGTGGCGGGCGCCTGTAGTGCAGCTACTCGGGATCTGAGGCAGGAGAATGGCGTGAACCT  
 GGGAGGCGGAGCTTGCAGTGAGCCAAAGATCGTGCCACTGCACTCCAGACTGGGCGACAGAGCAAGACTCT  
 GTCTCAAAAAAAATTAGCCAGGCATGGCGGGAGCGCCTGTAATCCAGCTACTCAGGAGGCTGAGGCA  
 GGGAAATGCTTGAACCCAGGAGGTGGAGGTTACAGTGAGTTAAGATGGCACCATTGCACTCCAGCCTGG  
 GTAACAGAGCTAGACTCCATCTCAAAAAAGAAAAGAAATGTTCTGGTCAATGCTGGAGATAATACATGG  
 TTTAGTTATGCTTGTATTGATTCAGCAATAAATAAATTTGGTGAGGAACATACAGAATTATATTTAGGTGATTATA  
 TTTTTATATTTTATATATAAATTTATATTTTTATATTTTAGGTGATTATTTTTAAACGCTTGCTT  
 TACAAGACTAATATTATTTACTTTTTAAGTTTTGTGATATATTTTATTTAACTAATATACCCCAATAG  
 TATTTCAATACAGAATCAACATTTAAAAATTTATGATACATTATGTATGTTTTTTCCTTCACTAAGACT  
 TCCAAATCCAGCTTGTGATTTTTCACACTTACATCTTATTTTGGACAGCCAGATTTTAGTGCTCATTGACC  
 ATGTGATCTGTGCTTAAGGAGGCTGCTGGAGCTGAGGCTGGGCTGCAGTACCAACATAGAAGTCTTTATC  
 TGTCAAACAGGAGTTTGAATCCCTGAGGGATATGGGAACCATAAAGGATCTTAAGCAGAGAAGTGACT  
 TTCTTAATTTTGAACCTATCCTGGTGTCTCATAGATTAGAGGAGAGAGATTTAGGAGTGAGGGATCAAG  
 CAAAGAAGGTGGCTTCAAGTGTGTTTCCATAGTAGTTGTACTAGTTTACATTCCCAACAGCAGTATAGAAA  
 TGTTCGCTTTTCACTACATCCACACCAACGCTCTATTATTTTTTGAATTTTTGAAAATGGCCATTCTTGTG  
 GGAGTAAGGTGGTATTGCAATTTGGTTTTGAGTTGCAATTTCCCTGATCTTTGGTGATGTTGAGTATTTTT  
 TCATATGTTTGTGGCCACTTTGTATCTTCTTTTGAAGCTGCTATTTCATGTCCTTAGCCCACTTTTTTG  
 ATGGAGTTGTTTTGTTTGTGCTAATTTGTTTGAAGTTCTTGATGATCTGAGATCTTAATCCTTTG  
 TTAGATGTATAGATTATGTCTCCTTCTCTGTGGGTTGTTGTTTACTCTGCTGCTGCTCTTTTGTGCAA  
 AAGTCTTTAGTTTAACTAAGTCCCACTTATTATCTTTGTTTTGTTGCAATTTGCTTTTGGGTTTTTGG  
 TCATAAAATCCTTGCCCTAAGCCCATGTCTAGAAGGGTTTTCTGACGTTAACTTCAGAAATTTATGGTT  
 CCAGGTCTTAGATTAAAGTCCCTGATCCATCTTGAGTTGATTTTTGTGTAAGTGAGAGATGAAGATCCA  
 GTTGCAATCTCCTACATGTGTTTGGCAATTTATCCAGTACCATTGTTGAATAGGGTGCTCTTCCCA  
 CTTTATGTTTTTGTGGCTTTGGCAAAGAGCAGTTGGCTGTAAGTATTTGGGTTTATTTCTCGGTCTCT  
 ACTCTGTTCTTTGGTCTACATGCCTATTTTTATACCAGTACCATGCTGTTTCGGTGACTATGGCCTTAT  
 AGTATAGTTTGAATCAGGTAATGTGATGCCTCCAGATTTGTTCTTTTGTAGTCTTACTTTGGCTAT  
 GTGGGCTCTTTTTTGGTTCCATATTAATTTTAGGATTTTTTTTCTAGTTCTGTGAAGAATGATGGTGGTA  
 TTTTGATGGGAATTCATTGAAGTTGTAGATTGCTTTTGGCAGTATGATCATTTTCAATATTGATTCT  
 ACTCATCCATGAGCATGAGATGTGTTCCATTGTTTGTGTCATCTATGATTATTTCTTTGAGAGGTGT  
 TTTGTAGTTTTCTTTGTAGAGGCTCTCACCTTCTTGTTAGTTTTGTTTTTTTTTGGTTTTTTTTTTTT  
 TTTGCAACTATTGTGAAAAGGAGTGAGTTCTTGATTGATTCTCACCTTGGTTGCTGCTGTTGGTGATATA  
 GCAGAGCTACTGATTTGTGTACATTAATTTGTATCCTGAACTCTGCTGAATTCATTAAATCAGTTCTAG  
 GAGCTTTTTGGGGAGTCTTAGGGTTTTCTAGTTATAAAATCATATCATCAGCAACACGACAGTTTGT  
 AATTCTCTTTACTAATTTGATGTCTTATTTCTTCTCTGTCTGCTCCGGCTAGGACTTCTGGTAC  
 TGTGTTGAATAGTGAGAGTGGGCATCTTGTGTTTGTCCAGTTCTCAGAGGAAATGCTTTCAACTTTTCC  
 CCATTCAAGTATTATGTTGGCTGTGGGTTTATCATAGATGCCTTTTATACAGTGAGGTACCTTGTATACC  
 GATTTTGTGTAAGGTTTTAATCATAAAGGGATGCTGGATTTTGTCAAATGCTTTTTCTGTATCTATTGCG  
 ATTATTCGATGGTATGCAATGATTTTGTGTTTAAATTTGTTTCAAGGTGGTGTCACATTTATGACTTGC  
 ATATGTTAAACCATCCCTGCATCCCTGGTATGAAACCACTTGATCATTTGGATTATCTTTTTGTATG  
 CTGTTTGTATTGGTTAGCTAGTATTTCTGTTAAGGATATTTTTTGTAGATGGAGTTTGTCTTGTGCCC  
 AGGCTGGAGTGTAGTGGCACTGCAACTTCCACTTTCTGGTTTCCAGCGATTCTCTGCTCAGCTCCCTG  
 AGTCGCTAGGATTACAGGCACCTGCCACCACCCAGCTAATTTTTGTATTTTTTAGTAGAGATAGGGTTT

FIGURE 1, sheet 52 of 94

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \sum_{n=0}^{\infty} a_n x^n$ , where  $a_n$  are the coefficients of the power series. It is shown that the function  $f(x)$  is analytic in the disk  $|x| < 1$  and that it satisfies the functional equation  $f(x) = x f(x^2) + 1$ .



TCTCACTCCTGTGCCCTACCAACAGCATCAAGTTTGTGTCAGGCAGCGGATGAGCAAGGCTAAGAACTT  
GCCGCAGGCTACAGCCTCCCAAGAAAGATGTAAGTAGGGCTTTTCATGCCTCCCTTCTGTTGAATCTG  
TACACCAAAATCACTCCCTCCCAAGTTCTGGCCAGGTGACTTCATGTTGGTTGGAATTTGTACAAAG  
TTCAGCTGGAGGTTTCTCTCGCTGGTCTTTTCCAGTTCCTCTGGCCACCTCCCAAGGACCCCT  
GTGAGACAAGGTAGAAATGGCTTATTAGGGGACCCAGAGAGCCACAGGGCTTTTCCCTTGCTTTCTCT  
ACCTTTTATTCTACAGCTGTCTAATTAATCAAGTCCAGTCCAGTAACTTCATCTCTCCCATGATCTG  
GAGCTGCAGATTCCCAAGTGGGTGTGTGTTGGGGGTGGGCTATCCCCCTTTCTACTTTCACAGCTT  
GGGCACTACAGTATTTGGGGTGTCTCTGGGTCTGTAGGAGCAAACTGCTTCCTTCACAGGGTCTGTG  
GATTCTCTTGGCTTTCTGTTATATTCCTGTAGTAGTCTGGAGCAGAACTTTATGGTGTGAGTTCCAC  
ACACTGCTCTGTTCACTCAAGTGAAGCTGCAATCTAGTCTGCTCCTTTCCACCATTTTTGGCCTTG  
ACGTATTACATTTATTTATGTTTGAAGTTTGGCAGTTTATTTTGAAATTTTACATAACAATGCCA  
AGCCAAATCCAACTTCTTGGCCTAAATCATTACAGATAACCTTTACTGAGCATTACTACATGAAGGT  
GTTGTTGACACAGGGGATTTAAGATGTGATCACTGACCACAACTCCAGGCAACCTAAAGTGAAAGAG  
GTCATTCAAAAAATAGGACCAAACTTCTCCATTCTCAAGGGACCTAGGACTGGAGTTGGCCTAAAA  
ATTCCTGTGTATCACCTCACCCACAGTTTGTATCTGCTCTCAGGGATCAAGGAAGCTCAAGGTTTCT  
GGCCCTTTTGGCTCATGTTCTTGGAGGTATATTCTATTGTCAAGTTAAAGTCGTACCCATCTTAGATCTG  
TTTCTCTCTCTTGTGGTTCAGTCTCATAGAAAACATAACTATGTGAAACACCAACTACCCCATAAAG  
CTATTCTGAGACTCAAGACATGAACCTCTATTTGATAATCAAAATGTATGATAGATGTGAGATATCA  
TTGATTTATCTATGATGTTTGGTTTAAAGCTTAGCTGTTGGAATCAGACTACTGCAATCAATTTTA  
GCTCTGTTGATAGGTGTGTAACCTTGAACAAGATACGTAACCTCTTCAGACCTTTGTCTCTTTGTTTGT  
AAATAACGACAATAATACTAATCTAGTAAATGTATAGGAGGCAATGTAAGCTTCTATTGTATTT  
GGCTTAAGGTGAGCCCTTCATATAAATTTGTTTACAATGGGTAATGAAAGTACGTTCAATTTTCCCACA  
AGATTTTAACTAATCTTAATAAATAAATGCCAGTTTGTAGTACTGTCTCATTTATAAGGAACTATAAT  
TCTTAAGTAATTAATTACTTTGGTTCCTTTGGATAATTAGTGATACATAAAATGCAGTACCTTGGCCTG  
AGGAACCTTACAAGTTAGCCTCCCTCTAATCTGGCATTCAAAGTCTCCACCTTCCGAATTACACCTGTT  
TTTTCAGGCATTTGCTCCACCTTCTAGCAAGCCTTTGGCTCCAGGAACTGTTCTGTTTCAATTGACGAC  
AGAATTTGCACTGTGAGAGAGCCGTTTCCATCTGAAGTTCAATTTTATGTAATTTTATATAGTAG  
TGACTTTCCCACTTTACTAATGCCTTTCTCTTTAGCTCATTTAGAATTCCTGGAAGTCAATGTTTTC  
CTTCTGAATTTGCTATCATATTCTGTCTGTGTCTAATCAGAAAGTTAGGTGAGCTGCTGTCTCAGCTCC  
TGTGTTAATCCAGGTACTGAGCTCTTTGTACCCTGCCAGCTTGAGGGCAACTTGGATGCGCTGGTGTGTA  
GTGATTTGCAACTGTGAGAGAGCCGTTTCCATCAACAAGTACAGCTTTTGGTTCTAAACACTGCTTGAC  
CTCATTCTGGTTTGAACATATACTTTGGCCTCTGCCCTCTACCTCACCTCCAGTTCTGATCTTGGGCATG  
CCACAGAACCCCATCTACACTAGGCTTTCAATTTTGGACTTCTAAGTCTTTACTTGACCACTTATTTTCT  
TTAATGCTAGACTTAATCATCCATGCATATGACAGCCACTCAGCTCTGACCCCAATACTTCATTGAGGC  
TCATGCCAGTCTGACCTCTCACAGGGAAGAGCACCCTGCCGTTGAGCCCTGGCCCTTGGATTATGCTG  
TCCCACCACTGCCCAGCTGGCTGCTTGGCACTGCATGTGATGTATCTTTGTTTATTTGATCGCTTAATTGA  
ATGGGATATAGGATTAATTCATGTTCCAGATCAAGTTGAGCCAAAGCTGACAACCTAGTATTAAGAAAA  
TATATTTATCTCTATCTGTCCAATTAATTTTAAATTTCTAGAGGTAGAGACAGTCACATTGCTATTTA  
ATTCTTAGCAGCAGTGTGAGATTTTGTGTAATTTGTTTATTTAGTGGTAAATTTATAAGGAAAAAG  
AGAAGTGGTGATTTATGTCAGCGCTTGGCTAAACTATTCCCTTGATATAAGTCTATTATTCAGGTCACAT  
AAGCATGACTGAAGTAATATCAACACATAATATCATATAATTTCTCTCTGCTGTCTCTGCTCACTTTCTC  
ACTTTTGTGTTGTGCATAGTGCATAGACCTGTAGAAAAATTTATAGTAATCTGAAGCATAAAACCAATAT  
TACAACCAACTCCAGTGAGATAAATTTTAAACACTTGGGAGTAGTAAGGCCATTTCTAAATTA  
AGTCAAAGTAAGATTCCCTTATTATTGAGATATTTTAGTGGTATACACTATCATAAGTAAGATGAATAAT  
TTTGTAGCAGCTGACACTGCTATATAGATATTTATCTTGGGAAGTTCTCAGTGTAACATCTTTACTGTG  
TTTTTCTCTTTAGATTACTTTTATGTTTATTTTGTGTTTCTGTTGGGGATTCAAAAAATATGCAATTTA  
TGCCACTCTTGGGATTCCTATATAATTTATGTTGTAATATGACAGTTCCATCATGAATTTTCCAGGTA  
TTCTTTTATGCAAGCAGATAATAGCTCATTTTGGTTTTAAACACATTCAATGCATATTCTTTCTCTCTCAA  
TAAATATGGTTTAAATTTATTAATGAAAGATTTAAATATGCTAAGCATTAAATAAATCGATTTT  
GGATTAATCTGTTATGTTTACTCTAGGGCTGTAGTTTCAACATTTATTCAGTTAAGTCTTCCCAAAATTC  
AATATTGCAACTGAGGATTTGTTTCTGTTTCACTGGATGTATCATTTACTCCCAAGATGTTGGTTTGG  
CATTTAGTACTGGTAATGGGCCAGGAAAGTGTCTATATTTGTTGTTATTCAGTATTGATCTTGTG  
CCTTGCACCCACTGAGACGATGGGAAAGTAGCAACAATACTAGGTGATTTCTTTGATTTAAACCAATTA  
AAAGAATTAGAGAGTTGTCTGATACAAGGCCAAAGAACTAAGAACAGAAACAAAGCAAAACCAACAAACA  
GCAGACAAACTCCAGTGAGATAAATTTTAAACACTTGGGAATATTTAAATAAATAAACAACCTCAATG  
AACCACCCAGGTTTATTAAGAGTAGAGAACTCAACACAGCAGAAGGCAGAGCTGGTGGAGGAAACTCAG  
CAACTGCTCAGAAATGAACAACCTAGGAAGGAGGTGCGAGTGACCTGAAACTCCTTTTAAACAGAGAA  
GGACAAAAGAGGTATGGGCTGACAAAAGGAAAGTGGTAGATTACTGATGTATTGCATTATGCTTAGAAT  
GTCTCAGAATGCGAGAGGCAGTAAACACACAGAGGATACAATATCCGGACCATGTGCAACTGCAAA  
TAAATGTTTGGGTTAAACTTGGTTGATTCTAAATACATGAAGAGCTGTGATAATTGAGGCAGAACTG  
ATAGACCTAACATAGAAAAAATCGATTTAAATTCAGAGAAGAGGTCATTTAAGAAAGTATAATGAAGC  
CACTTAATAAAGGAAATATTCCTCTAACTAAAGTTTGTAGATTAGGGCATAATCCTCAAGACAGGCTA  
ATATACTATTTTGTGATTAAATAAAGGAACTTTTGGTTTAAAGTAAGATGTTTCAAGCTGCTCTTAGAGT  
TTATTTCTCCATATTTGGGCATATAAGAATTTAAGGAAAAATATAGAAATATAAGAAAGATTTTATGAGA  
ATCACAAGCATAGTTTATAGGCAAGATAGCCTTTTCTGTTTGAAGCGGAAAAATACTATTTCACATGTA  
AAAACCTAAGTCAGTTTCACTGGCATGTCCACAACTCATGCCTGAAATATGTTTGAAGACAGATGTGA  
GACATTTCAAGGCAATAGATTAAATACATGAACCACTTATGCTAGCGTTCCATTATGGAACGCTAA  
GCATGTGGGAGTTATTTATATCTATTGCTCAAGGTCATCTCAAGGTCGTGAGTTTCACTCATGCAAAA  
ATTCAAAAAATGCAACCTCGGCGTAAATGGGTTAACAAAAGTTAATGTGGACAGTAAATAAATAC  
TAAATTAGACACACCATATTTTAAATTAAGAGATTAAAGAACTATGAGATATTTAAAGGCCACCCA  
CAGAAGTAGTAGGACAGGTAGAGAAGGATAAATCTAACAATCACTGTATCTCCACCCACCTTGTA

FIGURE 1, sheet 54 of 94



[illegible]

1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385</
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AGATCTGCTACTTTGTTTGGTTTTAATGGGGAGTTGCTAATGCTGAAATATAGTCAGAGAAAAGGAACGT  
 GGAATTTCTATAGAGGAGACCTGGCTCTGGGTAATACTACTGCTCTGGTGGAATGTTGCTCTTTCTG  
 AAGACATTGGTTCAATTCAATACATGAACATTCATCGATTATTATTTAGAAAAGCTAATCTACTGACAA  
 GACACAGAGTTAAGTAGTGAATAACAGAGACCTAGACACAGTTCCTATTAAGAAATTTTAAATTTAGG  
 TGGCATATTTTACAGAGAAATCTCTGCTTGGGGCAATAGGTACCTCCTTTGGAATAAGCATGGTGAGAA  
 AGAATTGCTTCTGGCAGATTAGTGAGAAGAGTGAGATATTTCTTTTCGATGACCTCTCTATTAATTTG  
 AGTGGTAAACCTTTGTGATGATTCAGGCTCTTCATAATCTTAATTTTATCATCCTCTAATACCAGGACT  
 TGCCGAGATCAATATTTTAGGAAACAGTCATGCTTGCTAAACCCAGGGATTTCTATTAACCACTAGATAA  
 GACATAAGTTTGTGATGCAACAGATATTTATGAGTCCATAATTTGCCCAGCACTGGGCTTTGGTACTCT  
 GGGCCTTGATACTCTAGGTTGTGTGAGAGATGCTAATATATTTAAGGTGACAGAGTTTCACAATGAGAC  
 TTTATGAAAATGAATATCCCTTTTAAAGTCTCGAGAAATATGATGTGCACCCGCTTGAGGCTTTATTA  
 TCTCCAGCGAGCATGAACCTGTTTGTGACCCAATTGTAGAATTGTTGTATGATGACTATCCCACTGGCAG  
 GCACCTTCTGTCCAAAGAGAATGTAATTGGATGTTGGTGACTCAAGCAATCCTGGGAAGACTCCTCCATGA  
 CCAATTAAGACAACAGGGGCTTGGTTTGTACTCAGCTCTACACCAATCAGCATGAGACAAAGAAGAGA  
 TCCATGGCAAGTGGGAGAGACTACTGTTTATTTACAAGCTAGAGAAGGAAAACCTGCAGTTCCTGAGTTG  
 CAAAACCTGCTAAGAAATGGGAGAACACAGAACTTTACAGGCTGAACCTTGGTGTCTTAGTTATTCCTCTT  
 GGTACAGAATGCCAACAGTAGGAGATTTCATCACTGAGATATTACAGGGAATGAAGCCAGGCAAGAAA  
 AATATGTATTCCTTTCTCTCAGCCCATAAATTTGTTATTAATAAATCAGACTCTTATAGAACAGCTT  
 GCCATGGCCTGCTCTAGAAATGTTTTATAGCAGAATTTTATTAATAAATAACACAGTAGTTTAA  
 GAGTGAACATTATAGTTTATAGGTCATAAGGGGTGTCATGGAGAACACATGTGGATGCTACTTGCCAGTTA  
 CTTGATCTAGGCCCTTACTCTTGGTTTTCTGTGCTCGGATAAGTTAGCATGATTGACATGCAGTTAAA  
 GGTGTGGTAACCTGTGATTGATTTCCCATCTTGATGCTCCCTGCTGGACTTCTCGGAAAATTTCAAAA  
 CAATTCATCTCTTCTAGAGGCTCCTGCTTGGTTGCTTCGGCTAAACAGTGTGAGCAACAGTTGGGA  
 AAGGAACGTTGCAGTAACCTTTTAAAAATTAAGTTAGAAAACAAATGTCATCAAAGTAAATGATAATTTGCC  
 AATATGATTGAGCAAAAAGATGAAGATGCACGCTCCCTACGATTTTGGCTTTGCAGAGAATTAATTTGAA  
 AAATAATAACATATTTTAAATGAATTGTAATATAAACACATGCTAATTGCAGAGGGGAATCCCTGTGA  
 TTATTCAGGCTTGTGTTTGTGCTGAGTCCCTTTTCAGTCAAGTCCATTCAGCTCAGCAGGGCAGAGGCTTG  
 GGCTGTTGTAACTTGTGGGCAGATACCCAGTGATGGGGCAGACATGAGCAGGTAGGGCTGACAGCATGT  
 GAATTGAGTTTTCTCAGTCATGCTGTTGCAGCTGCTCCCTTCCCTCATTGCTGAGTTTGCACAGCAGG  
 TAGGAACCTAATCTGGAGCCTGGGATGAAGGAGAACCACATTTGGGCTTGAGGAACAAGATCTGCCACC  
 CTGGTAGGCCCTGGTTAAATCTCATGCAAGTGTAGCAATGAGAGAGGGTATGATTGAGTTCTAATTTAGG  
 AGGAAAGGGGATAATGTGCCCTTTCACCCCAAGGAGAAATCATTGCTCATCTGTGCCTAAGTAGACTTA  
 TCAAGGGCAGTTGGTTTCAATGGTGTATCACCCCAAGGACTATAGTGTATGAGAAGTGGCAGTGTA  
 TTTGAATTTGGGTGCTGGCAGATGACATCATGAGGTATTATGGTTACCCATAAATATGCTAGTTTATTGA  
 GAAGGTGGTAGCTGCTAGTGATGAGAGGAAGGACAGAAGCAGTTAGTAAACAGCATCTGCAACAAT  
 TCAGTTAACTGGTGGTTGTACAGTAGCATGGTGGAAAAGTTGGCAATTAATAACTTCTAAGAAAACCTGA  
 ACTAATGAACCAATCCTGCGTGTGCTATGTGTATAACCTCCTTCTCACTATTAACAGATTGTTCCAAAC  
 TTATATAAGACAATGAAAATAAAGCTTGGCAATATAGGGAAGGGATGGAGGGATAAAGCTGTAAATCACG  
 TCACAGGCAAAATTAAGATATACCATGGATCAAGGGATTTAATGCAGAAAGACTGATCCTAACTTATTTC  
 TTTTATTAGCAATAAGATTGTTACTTACATTGATTATTTAAAAATGAGTTGCATTATTAGAAAAGACTA  
 TTTTGAAGACAACATAATAAATGTCAAGTAACTGATAGTAGCCAAGATATTTTAAATATATCAAGTTG  
 GTGCATTATATTAATGTGTCCCTTAATATGAAGTCTGCCCAGGCTTATTTATGTATTCAACAGACACA  
 TACCTGTTGAAGTGTACACAGATATTTCGACACAAGCAATGGTAAACAAGACAGATGCAGTCCCTGCTTT  
 CATGCAATTTGCAATTGAATGGTCTTTGACATTTTATTGTGATTGTTTTAGTTATTTAATTGGAGAAGTT  
 TTTAATTTAAATTTGTGTTATATTCAAGTTAAGGAACAAAATGTAATGTGCATTCTGAGACTCAGTA  
 ACACCTTCTGTTTTCTCTTTTCAATTTAAAGAAAAATTTAGTGCCCAAGATAAGCTAGAAATTTTGGAAAT  
 CAAGTAATTGATGACCTGGGAGCCAATTTTATTACAATAGTGTTTTTAGTGGTCTTAGAACTTTTCAGAG  
 GTGGTAGCTCTGAAAATAACACTGTAATAAATTACACATACATCTATCATCCAATAAATGTTAATTGAG  
 GCCCCTACAGCATTTGTGTAGATTCTGAGGTTACAAATTGTTGACCCCATGTCGAACATGTTGACCCCA  
 TCAATGTAATCAGTTTGACATTACACAGTCATTTAAACATTAAAGTGTGACGGATATTTTAGTTGTAAT  
 TTTGATAAGTGCTCTGAAGGAGAAAACAGTGGGTGTTGTGAAAAGCAGATTTGGTTGATTGATTATTAT  
 AGAGAGCTCTGAGAAAACCTTACTTGAGGAAGGAACATTGGCTGAACTCAAAGAGATGAGTAGGAGTTAAG  
 TAAGCAAGGAAGAAAAGAGACACATGAAGGAGGAAGAAATGTCTAGAAAACACACACACAGGTATATG  
 TATATGTACATGTATATGTATATGCATATGTCTCTCTFAGAAACATATAAACAGCTGCAACATGATTGAA  
 CTTATTTACCAAGCTTACCAAGCTTATTTTGCACCATGAAGGTGGAGATAAAGGCTTTTAAAGCAGCAAG  
 GATAGAATTTTGTAGTTTTATTTATAGGCTGGTTCTCTGACAACCTTAATTTTTCATCTTTACCAAC  
 TTCATGGTCTTCAGTACATACAATGCAATCATTATTATAAAATTATATTTTGAATCAAACCTAAGGTAG  
 GATGATTGAGCTGTGCGCCATCAACATAGCAGCATGAATGGTAGAGACTAGTCATTCCAACAGTGAAGG  
 GGCAACGTAAAACCTAATTTAATATTATATGAAAGTACTTCTGCCCCTGACTGCTTTTTTTTTTTTTTTG  
 AAGAAAGCAAACTTTAAAAATTTATTTTAGATTACAGAATTATTGCAAGGATAGTAAGAGAGTTCTCAT  
 ATATGCCTCACCAGTTTCTCTATTATCGACATCTTACATTATATGGTACATCTATCATAACTAATGAA  
 CCAATATTTGTTTCAATATTAGTAACATACTTATCTTATTCAGATTTTCTAAGTTTTCTCTAATGTT  
 CTTTCTGTGCTCCAGGACCCATCAGGATATGGTATGTATAGTTGTGATGCTTCCAGGCTCGCCATGG  
 TTGTGACAGTTTCTGAGACTTTCATTGTTTTTGTATACCCAGGTAGTTTAGGCAATTTGTAGAATGCCTC  
 CCAGTCTGAATTTGTGATGTTTTCTCATGTTTGTACTGGCTTTAATGTGTTTTGGGGAGGAAGACCA  
 CAGAGGTTAAGTGTGATTGTATCATCATCGTATCAAGGGTACATGCCATCAATATGACTTATCACTGTTG  
 ATATTAACCTTGATCATCTGGCTTGAGATGATTTGTGAGTCTTCTGTATTATACAGTTACTCTTCTCC  
 CTGTCATACAGTACTTTTTGGAAGAAGCCATTTTGTGCAGCTCATTTTTTTTTTAAATTTAATTTTAAAG  
 TTCTGGGGTACATGTGCAGCATGTGATGTTTTGTACATAGTTAAACGTGTGCCATGGTGGTTTGTGCA  
 CCCGTCAGCTCATCACCTAGGCATTAAGCCAACATGCATTAGTTGTTTTTCTAATGCTCTCCCTCCCC  
 CAACCCCAATCTGACAGGTCCAGTGTGTGTTTCCCTCCCTGTGTCCATGTGTTCTCATTGTTTCAGC

FIGURE 1, sheet 57 of 94

TCCCACTTCTAAGTGAGAACATGTGGTGTGGGTCTCTGTTCCTGCATTAGTTTGCTGAGGATAATGGC  
 TTCAGCTCCATCCATGTCTCTGCAAAAGGATTGATATCCTTCCTTTTATGGCTGCATAGTATTCCATG  
 GGGTTTATGTACCACATTTTCTTTATCCAGTCTATCACTGATAGGCATTTGGTTTGATTCCATGCCTTTA  
 CTATTGTGAATAGTGCTGCAGTGAACATATGCATACATGTATCTTTGTAATAGAGTGATTTATATTTAC  
 TGGGTATATACCCAGTAATGGGATTGCCAGGTTGAATGGTATTTCTAGTTCTAGATCTTTGAGGAATTGC  
 TACACCATCTTCTCAATGGTTGAACCTAATTAATTACATCCGACCAACAGTGTAAAAGTGTTCCTATT  
 TCTTTGCAACCTCGCCAGCATCTGTGTGTTCCTGGCTTTTAAATGATCACCATTCTGACTGGTGTGAGAT  
 GGTATCTCATTGTGGTTTTGATTGCAATTTCTCTAATGATCAGTGATGTTGAGCTTTTTTCATATGTTCT  
 TTGGCCTCATGAATGTCTCTTTTGAAGAGTGTCTGTTCATGTCTCTTCCAACCTTTTAAATAGGTTGT  
 TTGTCTTTCTTGCAAATTTGTCTAAGTTCCTTGTAGATTCTGGATATTAACCTTTGTGAGATGTATAG  
 ATTGCAAAAAATTTCCCCCAGTCTGTAGGTTGCCTGTTTCTCTGATGATTGTTCTTTTGTCTGTACAGA  
 AGATCTTTAGTTTAAATAGATCCCATTGTGCAATTTTGGCTTTTTTTTGAATTTGCTTTTGGCAGTTTTG  
 TCATGAAATCTTTGCTGTGCCTATATATTTTATGATAGATTTTCTTCTAGGGGACTTCAAACATATGCT  
 ACAAACTTCAATAACCAAAACAGCATGGTACTGGTACAAATACAGACACATAGACCAATGGAACAGAAT  
 AGAGAACTCAGAAATAAGACCACACATCTACAACGATTGACCTTCGAGAAACATGACCAAAACAGCAA  
 TGGGGAAGGATTGCCTATTTAAATAAATGGTGTGGGAGAACTGGCTAGCCACATACAGAAAATTGAAAC  
 TGGACCCCTTCTTACACCTTATACAAAATTAATTCAAGATGGATTAAGAGACTTAAGTGGAGCTCATAT  
 TTAAGGAGTGAGAAGATATGCTCTACCTCTTTAAGGGTGGAGTAGCTCTATAAATATTGGAAGTGTCT  
 ATCTCCTCCATTAAATTTTATTAGTCAACAATTAGTATCAGCCATCTAGAACCATGAATATTATGCTT  
 TGGGTACAGTCCAATACTATTTTATTTGTAGCTCATCTGTTCCAGCTTTGGCCATTTGGAGATTTTTTC  
 AGTTGGCTCCTGTATCTCTTTGGCTTCTTACATATCATTGTAGGGTTTTTAAAGCCTTTCTTACTTT  
 CTGTCACTACAAGATAGTTTCAGACTTAFTCTCTGTATTTTTTGGCCAGTTCTATGATCAGCCACTTCTC  
 CAGGAGCAATATTTCTTCAATGAAACCAAGATATGGGCTGTTGGTGACTTGTGTATTTGTGTGT  
 TGTACTTCTAGATCCTCTAAGCTGATAGTGCAAAGAGATATATGTGTGTGTACCAACCTATATATCTAC  
 ACACATATAAAAAATATTTCTATTGTAAACCATCTGTATCTATCTTAGGCTAAACCTGAGTACCTACTGAT  
 GTCTCCAATTCTAACCTGCAACAGCATGGAACATTCTAGCCTTCTCCTTCTACTTATCTGTCACTTCCTA  
 TAAGAGTATGAAATATTTCTTCAATGAAACCTGGCTCCTACCATCTGCTATTTATTTACTTAATTAATTCCACTATAC  
 TCTATGGAAGTTTCAGAATTGTAACTGTACTCATGTACGAAACAACCTTTATCAACTAGAGTATAGTGT  
 TTATATACAGTTTCTCTTGCCTTTATTTCTAACAGATTCCACTTACTCATTTTCCGAGTCACCTAGGTTAGC  
 GCCTTATTTTCTAAGTCCATTAGTGAGTTTGTCTCATGTATTTGTGCATACATTTAAATCTTTTGTAAAT  
 ATTTGTGCATCTCCATCCCATTTTCCCTGACATCCTAAATTAACCTTTTAAAGTTTGGATACATTGTGGTCT  
 ATTTCTTTGTCTGTAAAGCTTTATGGATTTTGACAAGTATTTAATGTATTGTATCACCATTATAGTAATA  
 TAGTTCCATATGGAATAGAAATAGTTTCTATCGCTGTAGCATAGAATAGTTTCTCTACTCTATAAAATATCC  
 TGTGTTTCTCTAATTTCAACCCCTCCTTCCCACCTTGAACCTCCTGACAACCCCTGGTCTGTTAATATCTT  
 TCTTTTGTCTCTTCTAGCATATCATATAATTGAAATCATACAATATGTAGCTTTTTCAGACTGGCTACTT  
 TCACTTAGCAATATTTATGTAAAGTTTCTATCTATATATTTTCTATGCTGTAGCTCATTCTTTTAAATC  
 ACTGAATAATACCTTTTATTTATCCACTCACTGGTGAAGAATCTCTTGATTGCTTCTAAATTCATGGCAAT  
 TATGAATGAACTGCTCTAAACATTTTGTGCAAGTTTGTGTGTCATGTGATTTTCAAATTAGTTGGG  
 TAAATATCTAGGAATTTCAATTTTCTGCATCATTTGGTAATAATGTGTTTAGCTTCTATAAGAAATGCCAA  
 CCTATCTTCCAAAATAGCTGTACCATTTTGCATTTCCACCAGCAATGAATGAGAGTCTTGTGATGCTCGAC  
 ATCCTTGTGAGCATTTGATTTTTGTGAGTGTGTTGGATTTTAACTATTGTAATAGATGTGTAGTAGTGT  
 TGATTGTTTTAATTTGCAATTTCTTTTCTTTTGTAGATGGAGTCTCGCTCTGTGCGCCAGGCTGGAGT  
 GCAGTGGCACGATCTCGCTCATTGCAACCTCTGCCTCCTGGGTTCAAGCAATTTCTGCTCAAGCTCC  
 CAAGTACCTGGGATTACAGGCGCTGCCACCATACCCGGCTAATTTGTTGATTTTTTAGTAGAGATGGGGT  
 TTCACCATATTGGCCAGGCTGGTCTTGAACCTCTGACCTTGTGATCCACCCGCCCCGGCTCCCAAGTG  
 CTGGGATTACAGACATAAGCCACGGCGCTCCGGCTGCAATTTCTTAAATGACAAAAAATATGAGGATATT  
 TTCATACACTTTTTTTTGGCAACTGTATTTTTTTAATTAATTTTATTTTATTTTATTTTGAACCTTTT  
 ATTTTAGATTGGGGTACATATGTACATTTGTAAATACAGGCAAAATTTGTGTCACAGGGGTTTGGTGTAC  
 AGATCATCTCGTACCCAGGTACTAAGCATAGTTCTTGATAGTCTTTTTCTGATCCTCTCCCCACTCC  
 CACTCTGTTCCTCAGTACGAGGCCCCAGTGTCTCTGTTCCTCTTTATGCCATTGGTTCTCATTTATT  
 ATCTCTCACTTAAAGTGAGAACATGAGTATTTGGTTTTCCACTCCTGCATTAGTTTGTCAAGGATAAT  
 GTCTCCAGCTCCATCTTGTTCCTGTACAGGACATGCTCTCGTGTTTTTTTTCTTCTTTTATTTTAA  
 TGGCTGAATAGTATCCACGGTGTCTATGTACTACATGTTTTTTTTTAAACCTGCATACCATTGATGG  
 GCATTTAGGTTGATTTCCATGTTTTTGTCTATTGTGAATGGTGTGCAATGAACCTACATGTGATGTCT  
 TTATGGTAGAACAAATTTATATTCACCTGGGCATATACCCAGGAATGGGATTGCTGGGTTGAATGGTAAT  
 TCTCTTTTAGGCTTTTGGGGATTTCACACTGCTTTCCACAATGGGTGAACAAATTTACACTCCCAACA  
 GCAGTGATAAGTCTTCCCTTTTCTCCATAACCTCCCCAGCATCTGGTTTTTTTTTGTGTTTGTGTTT  
 TTTTAGTATTTAATAATAGCCATTCTGACTGGTGTGAGATGATATCTCATCATGGCTTTAATTTACATT  
 TCTCTAATGATTAGTATATGTAGCATTTTTCATTTGTTGCCAACTGTATGATTTTCAATGAGGTGT  
 ACATCAGATGTTTGTGCCATTTTAAAGTGGGGTTTTGGGCTGGGGCAGTGGCTCACGCCTGTAATCCC  
 AGCACTTTGGGAAGCTGAGGCAGGAGATCACCTGAGGTGAGGAGTTCGAGACCATTCTGGCCAAATGG  
 TGAAACCCGTCTCTACTAAAAATACAAAATTAGTCGGACATGGTGTGGGCACTGTAATCCCAGCTA  
 CTTGGGAGGCTGAGGCAGGAGAATCACTGGAACCCAGGAGGTGAGGTTGCACTGAGCTGAGACTGAACC  
 ATTGCACCTCCAGTCTGGGCAACAAGAAATGAAACTCCATCTCAAAATACATACATACATACATACAT  
 ACATAAAATGGGTTTTTGTCTTTTGTGAGTTTGGAGGTTTTTTTGTATATTTTGAATTACAAGT  
 CTTTATCAGCCATGTGTTTCAAAAATTAATTTCTCCAGTTGTGGCTTATCTTTTCACTCTCTTAATTG  
 TTTTTCAAAGTAGAAATTTAAATTTAATGAAGCCCAATTTATTAATTTTTTCTTCCATATTGTGCT  
 ATTTGTGTATATAAAACCTTACTACCAATTAATATCATATAGAATTTTTTCTGTTTCTTCAAGA  
 AGTAGTTTTATAATTTGCATTATATGTTTAGATCAATGATTACCTTAAGTTTTGTTAAGGTGAAGG  
 TTTGTGTATAAGTTTTTCTTTTCCACATCAATGTCCAGTTGCTTCAGCAACATTTCTTTTATATATA  
 TCTTAAGGTAATCAGCGCAATATTTCTGAAAGATGACCTTTTTCTCATTTAATTGGCTCTCTTTGT

FIGURE 1, sheet 58 of 94

CAAAGATCAGTTGACCTTATTTGTGTGGATCTATTTCTGGACTTCTTACTCTGTTTCACTAGTCCATCTG  
TTTATACTTTAAACCAGTACCATACTGCCCTTTATTACTGTAGCCTTTATGGTAAGTCTTGAAATGAAATAG  
TGCAAGTGCTCCACCTTCTTCAGAAATTTGTCTCTTTCAGTATTAAAGGCTATTCTAGGTCTTTTGCCC  
TTCTTTAAACATGTTGGAATCAATTGTCAATATCTACAAATAGATTATTGGGATTGGATTAGATTAC  
TCTGAATCTGTTAATTAAGTTGGGAAGAATTGACATTTTATCAATATTGAATAATATGAACATGTAATAA  
TATTGAACCTTCAATCTCTATTATCTCTTCATCATTTTAAAGATCTTCTTTCAATTTTCATTGTTTTATAG  
ATTTTACATATAGGCTTGTACATACCTTTGTAAATTTATATCTTAGTATTGAATGTACTATTATAAATG  
GTATTTCTAACTTTGAATTCCTGTTATTCTATGATGATATGTAGGAAAGAAATTGACTTTTGTATATTG  
ACATTAGATCCTTTAAACCGTGGCATATTACTTATTAGTTCAGGGGAGATTTTGTGTGTGTGTGATT  
CATTGGAATTTTCTGCATAGATAATCATGCCATCTGTGAATAAAGATGTTTTATTCTTCCCTCCCAATC  
TATATATCTTTTATTTCTTTTGTGCTTATTGCACTTGCTGGTATTCTTAGCATAATGTATAATAGGAG  
GAATGAGATAAGATATCTTAGAATTATCCTCATCTTCAGGGGAAAGTGGTGAATTTTTGTCTTAAGAA  
TAATGTTAGCTATTGTTTTTAAATTTCTTATATGAAATGAGGAAATTTCTGTCTATCTGAATTTGC  
TGAGTTTTTAATCAATAAGCTGTTGAATTTTGTCAAATAGTTTTCTGTGTCAATTAATATGATCATA  
TGACTTTTCCCTTTTCACTGTTAATGTGAGATTTATATGATTATTTTCAAATGTTGAATTTGCCAT  
CAGACATGGAATAAATCCCATTTGTTCTATGATGTATAATTTATTTATGCACTGTTTGTCTGTCTGTCT  
AACATTTTGTGAGATTTTGTGCCAGTGCTCAGGAGAGATATTGGTCTCTAGTTTTACTTTCTTATAATA  
TCTTTATCTGATTTGGGTATTAGGATAATTCTAGACTCAGAATGAGTTAGGATGTGTTTTCTCTGCCTGT  
TTACTAACACAGATGTTGAGAAATTGGCACAAATTTCTTTCTGAAGATTTGTTAGAAGTAATCTTGCCAC  
CACCTGAGCCAGATGATTTCTTTAGAAGGTAATTAGTTATTGAATCAATATATTTAATATATATAGAGAT  
ATTTAGGCTATTATTCTCCATGTGTGAGTTTGGTAGTTTGTGTAATTTCAAGGAATTTGGTCCATTTCA  
TCCAAATTATCAAAATCGTGAGCATAGAGTTGTTCAATATTTCTTTTATTATCCTTTTAAATCTCCAAGA  
GACCATGCTGTGAGTCTCTCTTTCTTTATGATATTGGTAATTTATGTTTTCTGTCTCTCTTTTCTTTT  
TGCCAGAGTCTAACTCTGCCACCCAGGCTGGAGTGCAATGGTGTGATCTCTGCTCACTGCAACCTCTGCC  
TCTTGGGTCTCAAGTATTCTCATGTGTGAGCTCCCGAGTAGCTGGTATTACAGGCATGCTCCAATACAC  
TTGGCTAAATTTTTTTTTGTATTTTGTAGTAGAGTGAAGTTTTACCATGCTGGCCAGGTTGGTCTTGAA  
CTCCTGGCCTCAGGCTCTGCTGCTGCCCTCGGCTCCCAAGTGCTAGGATTACAGGCGTGAGCCACCGGT  
CCCGCTCTCTTTTCTTAATTAGCCTGAATAGAAGTTTATCAATTTTATTGCTCTTTTAAATAACCAGT  
TTTGTGTTTCACTGAGTTTCTTTATCATGTTTCTGTGTTTCAATTTTATTGGCATCTGCTCTAATTTTCAGAT  
GCTCCTTGACTTATGATGGGGTGTGTGCCAGTACATCCACTGTAATTTGAAATATCATAAGTCTTTTG  
ACTTATGTAATGCATCTAACCTACCAACATTTATCGCTTAGCCTAACCTCCCTTAAATGTGCTCAGAACA  
CATACATTAGCCTACAGTTGAGCAAAATGATCTGGCAACAAAACACACTATAGAGTATTGATGGTTTACC  
CCGATGATCACAATAGCTGACTGAGAGCTGCCGCTTGTCTGTGCTGCCAGCATTAAAGTGAGAGTATTGTT  
CCATATATTGCTAGCACAGAAGATCTAAATGAAATTTCAAATACAGTTTCTACTGAATGCATGCATAT  
TACTTTTGCACCATTTGGAAGTCAAAAAAATAATAAATCAAAACCTTAAAGTTGGGAATGCTCTATAT  
TATTCTTTCTCTCTGCTTGTCTTAAAGCTTATCTAGTTTTTTCTCTCTAGTTTCTCTAGGTGGTGGCT  
TAGGTTGGTTATTGATATTATATATTTTCTTATCTAATATATTTACTTAATGCTATGAATTTTTCTCTA  
AGCACTGCTTTTCTGCTATCCCAAAATTTTGTATGTTCTATTTTATCTTCAATTTAGCTCAAAATAGTTT  
TACTTTTATTTTGTAGGCTTTTCTTTGACTCATACGTTCTTTAAAGTGTTGTTGTTCAATCTCTAAATAT  
TTCGATATTTTCCAGCTATCTTTCTGTTGATTTCTAATTTATTTCCAATTTGGTGTGAGAGCCTACTTTG  
TACACTTTCTGTCTTTTAAATTTGTTAAGGGTGTGTTGTGACCCAGAATGTGGTCTATCTTGTGCGTA  
TTCCATCAGAATTTGAGAAGAATGTGATTAAGTTGTGGTTGATGGAGTATTCTATAAATATTAATTAG  
ACCATTTGCTTTGAGGCTTAACTTATAGCTCAACTATATCTGTATTAATTTTCTGCTGCTTGCCTAGCA  
ATTACTGACAGCGGAATGGTGGGTTTCTAAGTATAATAATGGTTTGGGCTTGTCTATTTCCCTTTTAG  
TTTCAATCATTTTGTCTCATGTGTTTTGATTCACTTTTGTAGGTATACACATATATACACATATTTATG  
ATTGTTGTATCATCTTGAACAACCTGACCCCTTTATCATCATCTTTATCCTTGGTACTTTTCTCTTTGG  
TAGTCTGCTTTGCGATGAAATTAATATAGCCACTCCAGCTTTATTTTGTGAATGTTAGCATGGTGTATCT  
TTCTCCATTCCTTTACTTTTAAACATATCAGAGTTATTACATTTAAAGTGGGCTATTACTAGGATAAAT  
ACCAAAATAAGTATTTTGCATGCTGGGCTTAAACCTAGATGACAGGTTAATAGGTGCAGCAAAACCA  
TGGCACATGTATACTTATGGAACAAAACCTGCACATTTCTGCACATGTATCCCAATTTAAAGTAAATAA  
AAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA  
GGCTGAGGCAGGAGAATCAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA  
CTTTCTTAAATTTCAATCTGACAATTTCCATCTTTTAACTGGTATATTTAAACAATTTATATTTAAAGCA  
AGTGTGATATATTTGAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA  
TTTTTGGTCTTTGCTAGTTTTTATTGAGCAATGTATGTCATACCATTTTATCTTTTCTCTTAGAGTATTA  
ACTATACTTCTTTTTTTTTTTTTTGTAGACAGAGTTTTTCTCTTGTGTCAGGCGGGAGTGCAATGGTGC  
GATCTTGGCTTACCAGCAACCTCTGCCCTCCTGGGTTCAAGCGATTCTCCTGCCCTAGTCTCCCGAATAGCT  
GGAATTACAGGCATGTGCCACCATGCCCGGCTAATTTGTATTTTATAGTAGAGCGGAGTTTCTCCATGT  
TGGTCAGGCTGGGCTTAACTCCTGACCTCAGGTGATCCACCGGCTCTGCCTCCCAAGTGTCTGGGT  
TTACAGGAGTGAGCCACCGCACCCGGCTTAACTATACTTCTTTAAAGAATTTTGTAGTGGTGCCGCTAA  
AGTTACAGTATACATTTTAAAGTATTCTAATAACACCTTCAAATAACACTATTCTTTTACATGAAAT  
ATAGGGATATTATAACATAGTATTCTCAATTCCTCCTTACTGTCCCTTGTGACATAGCTGTCAATTTATTT  
CATTTCACTTACCTATATACATAAATCACCTATACATTGCTGCTATTATGATTTTAAACAGGCAGTTATT  
GTTTACGTCAATTAAGAATTTAGAAAGAATTTAGAATCCTGTGTAAATAAATAAATAAATAAATAAATAA  
TAATTCATGCAATCTCTGATTATCTTCCATGCTTTATGTAGATCCAAGTTTCTGACTTATATCACCTTCC  
TCTTGTCTGAAGAACATCTTTTAAACATATCTGCAGGGCAAGTCAGCTGGTGATGAATCTCTGAATTTT  
TGTCTGATTTTTTTTTTAAATTTTCTTCACTTTTGAAGGATAATTTCCCTGCATAGAAATTTAAATTTG  
GTCATTTTTTCAACATTTTATATATTTTACTTCACTTTCTTTTAAATGTACGGTTTTCTGAAGAGAAAT  
CTGCTGTATTTTCACTCTGTTCTATGGTTAGGTGCTTCCCTGCCCTGGCTCTGGCTTTTTCAAGATTTT  
CTCCCTGTCTTTGGTTTTTCTACAGTTTGAATACAATATGCCATAGGTGTTGTTTGTGTTTTTGTGTA  
AGGAGTGGCATGTATTTATCTTCTGATACTCCCTGAGCTTCTGGATCTGTGGTTTGGTGTCTGTCTATT

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AATTTTGAAGAGTTCTCAGCCATTACTACCTCAAATATTTCTTCTCGCCTTTCTTTTTTTCTTTCTG  
GTATTTCAAATATGCATATGCTTGTATACCTTTTGCCTTTTCATTCTTTGATTCTTTACATTTTCAGTT  
GGGGACGTTTCTGTTGACTTATCTTTCAGCTCACTGATTATTTCCCTGGCCGTGTTGAATCAATTGATTA  
GTCCTCAAAGACATTTTTCATTTCTGTTACACCATTTTACATTTCTAGCATTGCTTTTGATTCTTTCT  
TAAATTTCTATCTTTCTGCTTATATTACCCATCTTTTATTGTATGTTGCTCTTTTCCATTAGAGCC  
CTCAAACCTCTTTTTTTTATTATACCTTTAAGTTTATAGGTACATGTGCACATTGTGCAGGTTAGTTACAT  
ATGTATACATGTGCCATGCTTGTGCGCTGCACCCACTAACTCGTCATCTAGCATTAGGTATATCTCCCAA  
TGCTATCCCTCCCCCTCCCCCACCACACACTCCCCAGAGTGTGATATTCCCTTCCCTGTGTCCAT  
GTGATCTCATTTGTTTCAGTTCCCACTATGAGTGAGAATATGCGGTGTTTGGTTTTTGTCTTGCATAG  
TTTACTGAGAATGATGATTCCAATTTTCATCCATGTCCTTACAAAGGACATGAACATCATTTTTTATG  
GCTGCATAGTATTCCGTGGTGTATATGTGCCACATTTCTTAATCCAGTCTATCATTTGTTGGACATTTGG  
GTTGGTTCCCAAGTCTTTGCTATTGTGAATAATGCCGCAATAAACATACGTGTGCATGTGTCTTTATAGCA  
GCATGATTATAGTCATTTGGGCATATACCCAGTAATGGGATAGCTGGGTCAAATGGTATTCTAGTTCT  
AGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAAGTAGTTTACAGTCCCACCAACAGTGTA  
AAAGTCTTCCCTTCTCCACATCTCTCAGCACCTGTTGTTTCCGTGACTTTTTAATGATGGCATTCT  
AACTGGTGTGAGATGGTATCTCATTTGTGGTTTTGATTGTCATTTCTCTGATGGCTAGTGATGATGAGCAT  
TTTTTCATGTGTCTGTTGGCTGCATAAATGTCTTCTTTTGAAGAGTGTCTGTTTCATGTCTTTGCCACT  
TTTTGATGGGGTTGTTGTTTTTTCTTGTAAATTTGTTTGAAGTTTCATTGTAGATTCTGGATATTAGCCC  
TTTTGCATAGTATTCCGTGGTGTGCAAAATTTCTCCCATTTTGTAGGTTGCGCTTCACTCTGATGGTAGTT  
TCTTTTGTCTGTGCAGAAGCTCTTTAGTTTAAATTAGATCCCATTTGTCAATTTTGGCTTTTGTGCCATTG  
CTTTTGGTGTTTTGGACATGAAGTCTTGCCTATGCCTGAATGGTAATGCCTAGGTTTTCTTCTC  
TAGGGTTTTTATGGTTTTAGGTCTAACGTTTAAATCTTTAATCCATCTTGAATTGATTTTTGTATAAGGT  
GTAAGGAAGGGATGAGTTTCAGCTTTCTACATATGGCTAGCCAGTTTCCAGCACCATTTATTAAATA  
GGGAATCCTTTCCCTGTTGCTTGTCTTCTCAGGTTTGTCAAAGATCAGATAGTTGTAGGTATGCCGCGT  
TATTTCTGAGGGCTCTGTTCTGTTCCATTGATCTATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTG  
GTTACTGTAGCCTTGTAGTATAGTTTGAAGTCAGGTAGTGTGATGCCCTCCAGCTTTGTTCTTTTGGCTTA  
GGATTCCATGCTGAGTGTGGGCTCTTTTGGTTCCATATGAACCTTAAAGTAGTTTTTTTCAATCTGT  
GAAGAAAGATATTGGTAGCTTGTAGGGGATGGCATTGAATCTGTAATTAACCTTGGGCAGTATGGCCATT  
TTCAGCATATTGATTCTTCCATACCCATGAGCATGGAATGTTCTTCCGTTTGTGTTATCTCTTTTATTT  
CATTTGAGCAGTGGTTGTAGTTCTCTTGAAGAGGTCTTCCATCCCTTGAAGTTGTATTCTTAGGTA  
TTTTATTCTCTTTTGAAGCAATTTGTAATGGGAGTTTCACTCATGATTGGCTCTCTGTTTGTCTGTTGTTG  
GTGTATAAAGATGCTTGTGATTTTTGTACATTGATTTTTGTATCTCTGAGACTTTGCTGAAGTTGCTTATCA  
GCTGAAGGAGATTTTGGCTGAGACAATGGGGTTTTCTAGATATACAATCATGTCTCTGCAAAACAGGGA  
CAATTTGACTTCTCTTTTCCCTAATGAATACCCCTTTATTTCTTCTCTGCTAATTTGCCCTGGCCAGA  
ACTTTCCAACATGATGTTGAATAGGAGCGGTGAGAGAGGGCATCCCTGTCTTGTGCCAGTTTCAAGGGGA  
ATGCTTCCAGTTTTTGGCCATTGAGTATGATATTGGCTGTGGGTTTTGTATAGATAGCTCTTATTATTTT  
GACATACGTCCTCAATACCTAATTTATTGGGAGTTTTTAGCATGAAGAGTTGTTGAATTTTGTCAAAG  
GCTTTTTCTGCATCTATTGAGATAATCATGTGGTTTTTGTCTTTGTAGAGCCCTCAAATTCCTAATCACA  
ATTTGTTATCTCTTTTCCCTGACATTTCCACATCCATCCATCAGCATGCTTATTGGCTTTACTTTCAAAAT  
AAATTAACCTCAGCCACTTCTCAGCATTTTTAAATCACCCTAATACAAACCCCTGCTACCTCATCAAC  
TGCAATGGGCTTCCCTAATTTTGTAACTTTTGTATCTTTGAGTTCTTCCAAGAGCCAAGAGTTCTTCCA  
AAGCTATAAACCCTATCATTTGGCACTCTCTGCTCTATGGAAGCAGTGGCTTCTCATCTCTTTCAGAGT  
ATAATGCAAGCTCTCACCTTAGCTGGCATGGCCCTGTGGGATTGGCCCTCCCTTGTCTTACTTTTTCTT  
GTTCAGGCTGTCTGTGACCTCTCTGGTCTTTGGCTCTTACTAGAAACCTTTGAACCCGTTTCTTCCAGT  
GTCAGTATTGTGTGTTGTTTCCCTTCCCTTCTCATTCTGTTTCTACAGCACAGAGAAGTAGTA  
GTCCCTGATCTAAACACCTCTCCACCTGCTTTCCACTTTGTTTTTCCCTTAGCACTTACCATTATCAG  
ATATCATATATTTTATTGTTTATTGTTCTAATCCTCACAAAATATGAGTTGTGAGGATAGGGATTG  
GCTTTTTGGCCAGAGCAGTGCCTGACTCTCAATAACTTTGTTGTTAAGTGAATGAATAAAATAAAAT  
TAAATTTGATTCAAAGTGTATGAGCATGTGTACATTTACATAAGTGATACATGACATTCTTCCATTCTCT  
TGGGGGCTCTTTAACCATTCTCAACAGTTGTAGTACCTTTAAATAATCATGATGAAGATGATTTTGTAG  
AGCTAATTTTGGTAGGAGACAGCAGTTTGTAGCTGTCCGCTCCATGTGCAGAATAATAGCCTATTTTATT  
ACATCTGATATTCAAGCACTAGAATCTATCAATAGGTAAATAATTTCCAAAATAAAAGCATCAGTGGGA  
AAACAGGGAAATTTTAAATAAAGAAATTTCTAGACCAGGATGTGTCAATTTGTAATCTCTAATAAGA  
AACGTTATAGCTGATAATTCAGCAATTAACAGAAATCATGATCATATCCATATGGATCAGTAGAGGCTCT  
GGCTTATATAAATAGCTTGCCCTCTCAGGATTCTAGAGCCCATATGTAACACAGAACACATTTATATTG  
ATTGACAGTGCATGTAGTTTCTACAGATTGTGCCAGTCAGTGTCTTCTAAGGCAGTTATGCCATGGTAA  
TTAAATTTATGGGCTCTGAAATCAGCTGCCCTGGGTTCAAACCCAGCTTCATGTGTGAGCTTCCCTGGC  
TGTAATAAGGAATTAATAGCACCTGCCCTGTGGCTTTGAAATTAACATGATGTAACCTTTGTCAAGAGC  
TTAGATGAGCACTTGGGATATGGCAGTGTCTCAATAAATGTTAGTTTACCATCATCATCATATTATTAT  
TATTACTGATTGAAGCAAGACAAACTGGTTCTCACTTCAGCAGAAAAAGAAATTAAGTGAATTTTGT  
GTTAGATCAGAGATTTAAGCTGAAGGATGAATAACAGACTTGGAAACAGGTGGAAACCAAGAGGCAGT  
CAGCATGGCATAGCAGCCAGCACTTCCACAGTGTGGTGCCTTGGGGGAGCTGGCAGGAGCCACTGCCT  
TCACTCCTGGACTGCAGATCTACCACAGGACAGCAGTGAATTGTCTATGTCCAGACTTCACAGTCAC  
AGGGAGCAGGCTGCATGCAGGTGGGGCCAGGTACCTACCTTACCCCTAGAGTCTGGAGCCACAGAAAA  
CAGTAATTTGCTTGTAGCTTTTGTGATGGAAGCAAGTCTGACACCCACCAACTCACATACTAGGGAA  
TTCACCAATGTAGGACGGCAGCTAAGATGCTGGGAAACCAAGAAATTAACAAATGAGTATTACACCAAT  
AGTTAATTCATTACAGATTTCAATATTTCCAAAAACATCTACAAAGAACAGCTCACTTAATATACT  
CCAACAAATGATGAAATCTCTCTTGGTTCATCAGCTTTTCTAAATTTCTGTAACCTTAGGTGATTCTGAA  
TTTCTTAGTGATTCTGAACTTCTAGAAGATTCTGAAACAGAACAGTCTTACTTTGGGATGTATTCAAATC  
CTAGAGATCAGTCACATCAATCTGTGCCCTTTTCTATTATGTAACATGAACAGGAGGACCTTTCCAAC  
TGCTTGGGAACCTGCTCTACACAGGGTATATTATCACATTTAATAAGAAAGAGTAATTTGCATT

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GTGACCCCTTCATCTGAGGTCATCGGGACTGTGCTGTCTCCCAAGCTCCACTGTAAAGGGATAGACAACA  
ACCTTGTCTCCAGTCATTGTAATCTGTATCAGAGAGCATCATTAGATGAATGAAGATGGAATGTTCTC  
ACGGTCAGCAGGTGGGGAAGGCAAGACTTGTGATTGGAAGCAATGAACCATAGTTTCATTCTAAGGCTTG  
GGGAGAGCAACTTTGAGGAAATGAGGCCCTTAACTTGCCATGTAGGAGAAGTTGGGGGGTGGTAAATTG  
GGCACCCCTTATCTACTAAACGTAATCTTTACTTCCCAACCTCTAATTTTTCTCAGTTGGGCTTGAAAT  
TGTTTTTGTGTTTACACTTTATGGGAAAAGAAAGGGAATCCTAATAAGGTCCATGCCAGCAAACTCT  
AGAAGAAGAACTAAGAAATTTCAAATTTGACAGTTTGTAAATGAGAAAAGCAAGGTTAAAGGATTTGTT  
AAACAGATGACCAAAATAATTATTGGAACCTTCTGCTTCTGGCCAAGGTGGAATAATAAGGGCTACATTT  
ACCTTCCCAACAGAAAATATAATAACAAACAAAACCTGGACAAAACACTGGACATGACACTGTTGTCTTT  
AAACCTTGGACATCAATCAGTGCAGGATGTTATTTTGAAGAAAGGAAAAAATTTGGGGTGAGCCTTCT  
GATTGTTTTCCAGACTGGAGAGAAGTTTCAGGCCACAGCAAGTGGGGAGGAACCTAGGTGTAAGTATATGT  
ATAAGGTAGCACATCATAGTGGCCAAATGAATGGCACAGGAAAGAAAACTACAAGAACAGAGGAGGTAG  
GGCCACAAAACCTAGAGTGGGGTCCAAGATTCATATGGATAAAATGGGGTGTAAATTTGGTTTTCAAGGC  
CAATACAAGAGGAGGCATAGAAAAAGAAACAGGTGGTGTGGGAAGTAGTATAAAAGGGGCACAGGCTT  
ATCCTTGTGTTTTATTAAGAAACAAAGGTTTTTGGAAAGGATTTGTAGAGATAAGTTTGAAAGTAGTTTGA  
ACTATGTGTGGAATTCATGAATCTTAGAGTTTGAATTTTATTCAGGAGATCAGTAGCTTTTAAATGTAA  
AATAAAACCAGTAACTCTATCTAAATAAAATCTTCCCCTAATCCCAATATAAAAAATACATATAAAAG  
CGTAGCTGCTCTAGACAAAATGGCGGTATGAGATGACCAGAAACCTCAACAGCACTACCTCTGGTAGCC  
CCATGAACTGCCAAGATTTTCAGAGTATAGTTAATTCCTGCTGACGGCTAAGGCAGTCATTGAGTGT  
TGGAAGAAGAGCGGAAGATAGACAAGATCAGTTAATTTGGTTGGAGGGAAGACTGAAGATAGGCAAGGTG  
ACAAATTTAGGAATCTGTTGCAATGATCTAGGCAAGAAGGAACCTATGAACCTAGGAGGGAGGCTTAAAGACA  
GCAAGGAGGGAACATATAGGCAGGGACATGTGAGGAAATGCTTAGTAGTTAAGGTGAGTTTGTAGGTATGA  
AAGAGAGAAGGAAAGCAACATTAAGTACGATTAAGTGAACAGATAATTTATAGCTCCTTGACCTGAAAC  
ATTTAGAGGCTGTGATAACACTAATAATAATAATCTATAATTACATAAAATACGTAGTGAATGATATAT  
CATGATATAATCATCTTACCAATGCTTTACAGTCAATGACATTGTGTACAGAGACTTTGGAGGCAGATA  
GACCTCGATTGTAACCTCTGTGCTGCCCGTGGTATGACCTTGAGCATGGTAGTTAATCTGAACCTCTTTTC  
TTTTGATGTTAATTTGGGACAAATGAGTACTTAACCTTATAGTACTTTGAAGGAGAGTGTAGAAATTGA  
TACTGGGGAGTCTCTCCACAGAAAGTTGTATTAGTTATTGTCTTTATTTTCATTCTTAATGAATTAGCACT  
CCCGTTTTCTTTAACATGTTGAATTTAAACCTCTTAGTGTATTTCTTTGTCTTGCCCTTTAATACCCCA  
TGAATTTATGAGAAACAAAAGAAAGTATTATGCAAAATGTTTGAATATCTAATAATACATGAACGTAGT  
CATGGGAACTGGAGAAATAACTTTTACTGATATTATAGTATGTTTTTTTCTGGAAGCATAGCATATTAAAG  
AAAACCTCATTTCAATGAAAGAAAATTTAAAAATTAGAGTGCATTAGAAGCATAATCCAATGAATTCATTT  
CCTAATGAATACCTAGGAGTATGTTAACTTTTTCTGAGATACAATAGCCAAGCCAAAGAAATTTAAAGAA  
TGAAAAAACAGATGATTAAACAAACTGTGAAGTAATTAGAGGTAGTCTTTGAAATGCCTCATTAGGCA  
TTTTGACTCATTTAGGACAGATCCTTTTTATTTAGGGCCAGGACATAATTTAAGCAGTTGATGTGCTTT  
TAGCTCCTTTACCTTGCCACAAGTTGTGCGCTGTACTGCCTTTCCACCTAGCTTCCAAGTCCAGGCCGA  
CTTTGAAGAGATTCCTTAGGGCTCACCTCCCTGGAGAGTGCCCTCTGTACCATCTCTCTCCCTTTCTCTC  
CTCATTCCTATTGCCTGAGTTTATTGTTTTAATAAATCCCATAGTTAACACCTCCTAGGGTGGATTAG  
AATCCATATCAATCCCATTTGATTGTTTACTAAGTAGAAATTTTATACTGAGCCTTTCTAAATCCTTACAAC  
AACGTGACGAGGATATTATAGTTGCTTTAACCCAAAGGAGATGAAATTCAACTGGTGGCATTTGCACACTT  
ACAGTGGGCTTGCAAGGATGAAAGAGAGCTTGGTATCTCGATCCCTTATACAAAACAGGTGGGTCTTGTTA  
GAAAAATCTTCAATAATTGTTAAGGTTAAAAATTTGAAAAGTGGTTCAAAGAAATTTGCTTTGATGCAA  
ATATTGTCTAGTCAGTTACATAAATGAGCTATAATGACAGTGACACTAGCTATCCAGGGCACGACATC  
TCTATTGTGCTGTTGAATATACTGCTCAACCATTTCTGGAATAATGGCATGTTTCATGTATGAATGACAATGT  
ATCTTGTGTGATGGCATTCAGCCAAACATGTTGGTCCCTGCAAGTAACTTCTTGACTGTCAAGAGGC  
TGCTGTGTTAATATTGCGATGATCTAACTAATGTTTCCCTTGTGTTTTTTCTCTGCTTTATGAGCTGG  
TAGTTTGACCTTTGGCTTTTCCCTGAGAGTTAACAAAAGTTAGACAGTTGGGGGTGAACCTTAAGTAA  
AATCCATATCACTCTATGTTGCTGCTCTACTAACAAATTCAGAAATGCTTTGGTAGAAAGCAAGGAATG  
AGTTTTAAATTTCTCTTTGAATTTCAATTATCCATGCCACTCCTGTGGTCCACCATTCTATATAATTAA  
GAATAAGCTGTATGTTCCATAGTGACACAGGCTGTTATTTCTGATTGTCAGTTTTCACTTAACCTAGGGT  
AAAATTGAAATAGAAGTCGCATCCTTTTTTTTACCTTCTTCCACTCAATCTAGTTAGATATTTTGA  
ACTTCTATAAAATGTCTATGCAATATTATACCAATAATGTGCAAAATTACTACTCCCATGTAGAAGAGG  
ATCCATTCTTCAATGAACCATACCCTTGGGATCCTATCACATGCAGTTGGCCATATAATATTTTATATTA  
TTGTTTTTTGTTTTGTTTTGTTAAGTTGTACCTACATAATGGATTAAATTCAAAATCTCTGTTTAACTG  
AAACAAAATCTGTTTAACTGAAGCAAAAAACAAAATCTCTGTTTTTTGTTGTACAAAACAAAAACAA  
TAATATTTTTGTTTTGTTTTGTATACTTCATAGGGACTTTGGAATTTGGAATAATCGTTTCATTTAGGGTA  
TATATATTAGTCCATTTTCATCTGCTATAAGAAATACTTGAGACTGGGTAATTTATAAGAAAAATAG  
GCTTAATGAACCTCACAGTTCCACATGGCTGGGGAGGCCTCACAGTCATGGCAGAGGTGAAGGGGAAGCA  
AAGGCATGTCTTATATGGCAGCAGGCAAGAGAGTATATGCAAGGGAACCTGCCCTGTATGAAACCATCAGA  
TCTCATGAGACTTATTTACTATCATGAGAACAGCACAGGAAAAACCTGCCCCCATGATTACAGTTACCTCC  
CACTGAGTCCCTCCCATGATGTTGGGATTATGGGAACACAAATTCAGATGAGATTTGGATGGGGACACAG  
CCAAACCATATCAGTACATTAAGAAAAATATTGTTAGCGCTAAGTGAATCTACTTTACCTACTTTGATT  
ATTTGATGATTTTATAAATAGTCATCTCTTCCCTCATCTTTCCAGTCGTATTTGTTGTTCCAAAGCCAA  
AACCTGTGTGCTTGTATTCACAACTGAATCATACAGTTGTGAGACGTAATGGGTGTGGTGGTTTCCA  
CTTACTTCTTTACATAGTACTACAATAAGCCATCTAAGTAGTCTGCTCCTAAATCTCCTCAAGAAGGGA  
AATATCATGATTTGATTTAAATGTGACATCCTTTCTAGAGAAGTTTCTTTGTCTCCTTCTTCCCCAGT  
CACTTCTCTCCATCCACTGTGCTTTCCGCGAGTTTCATTGTTTCAATTAATTCATTCAACGAATATTGAATA  
CTTTTGTATCAATGTCTTCTCCTCCCTCAAGCTGAAAACCTTGATGGAGGGTAACATGATCTGTCTTTGTTA  
CCACTGCATCTTCCGTAATATACATTTGAAGTATTGAACGGATTTTACTAAATGAACAAATACTTTGA  
TAAATATTTTTGATTACTGCCAATATCAGTTTCTGAATGATTCTAAATTTCTTCTGCTGGAAAGTAGA  
TTAGCGTTAGTATGACTGCTGAAGCCTTTTAAAGTGGGTGTAATACTACGTTTTCGTTTTGTTTCATTAA

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CCTAAGTGCTGTTCTTTGGAATCTTTTAAAGTAAGATAAAATTACATTCATGAAAGAAGCATATTATTTT  
 TAAAGTACTTTATTTTGGAAAGGTAATGCTTGTGTAGTTATAATTTGGTTACTCTTGATTTTACCTTA  
 GGAAAAACAATACCTTCTAACCATTTCTTTTAAAGTCAATCTCTTGCTTCTATTTCTCTCTGTAGA  
 TCCGCTATTAAAGACTGTAATCACTGCTGCATCTTTCTGTAAAGGCTTGATCGCATTGTTAATTTCTTTC  
 TAAACTTGTAGAGTAGGTGTATAAATCGTATTTGGGTAACTACTGACTAATACTGAAGAACCAGGCATT  
 TTCTTACCCCGATCTCACACGAAGTAGGGAATACAAGTCAGAACTTATCTTCTCAAACTCTGACCTC  
 AGAATTTCCCTGAGAAATCTGAACCTAAAAAGATTCTTTGCTTTTGACATTTTCTCTGGTGTCCACCGC  
 AAGGCTCTTGCTCTTACATTTTCTTTTCTTCTAATGTTTCAAATAGAAGATGGTAGAGTCATATAGTA  
 CAAGCTCAGCATCGGAGGGGCTACTGGAGGTCAACTAGTGCAAAATGCTTTCTGAATAATGGAATCCTTTG  
 GGAATACCCCTTGAAAGTCTTCACTAGCCTCTTCTTGAAACCCCTCAGTGATACCCCTCATCGTCTCC  
 TATGATGGCAGCTTCTATCTTTGTCGTGAGCTCTGACTATTACAACTGCTTCTTACATTGAGCTGTAA  
 CTAATAAAAAGTTTCCACACCCCTGCTTCTATTTTAGCCTTTGGGCTCATAAAGAACAAGTTGAACCCGT  
 CTTATGCAAGAACCCCTCTACGGGAGATGCTCAGGTTTCTCCATGTTTCTCTTCTTAGGCTAACC  
 CTTCTGTTGTTCTCACTTACTACTATATAACCTGATTTCTATGCTCTCCTTACCCCTCTTGTACTCTAAC  
 TTGAGTAGGCTAGTTTTCAGGATCCAGCAATAAGTGTGATACATCAGGTATGCTCTGATGAGTTGAGAGTA  
 GAGTGGACATAGCATCTCCCTTAATTGAGATATTGTGATCTAATTGGCAAACTGGCAATAAAGTTGAA  
 ATGCTGATCCAGGACAATGGCTGGTCAGGTGCCATTGTTCTCATCTTTTACTTTTAGGTGTCCCTCAAT  
 TTGTTAAGTTAGTACCTACGTAATGTCTGAAACTTGTTAAGTTTGTACCTACATAATGGATTAAATTC  
 AATCTCTGTTTAACTGAAACAAAAAGCAAACTCTTTTTCAGAGCCAGAACTGGAATCATACGTAACAG  
 AGAATGATATTGTACAAGTTGCTTCTATCTCTTAAAGTAACGTTTCTCAAACCTTACAAGATTATTGTGAG  
 AACTAAATTAGTTCTAAAGTGCTTCCATGTAAAGTGTATGTAATGCTTAAATATATAGTAAGTGTGA  
 ATGCAATATTAGAAATAATAATCTTTATTATAATTTTACTATTTCATGAGAAGTACTTATTTTAAATA  
 CTGAGCAATAGGAAGAGTTTCATGGCTCTCTATGTTTGAAGTGTCAATTAATATATATATATATAA  
 AACATATATATATTTCAGTCACACATTTGTCCAAATACCTTGACAAATTAACAAAAAATAAGACAAAT  
 CTCACGCTAGTTATTTGTTATAAGTAATAGAACAACTGATATGTTATAAAGAGCATTATTTCTCATGT  
 CTTTGATATTAAAAATAGTTGTATTAACCTTTTATCAAAACGATTGCTTCTCTATATAAATCTAAGAA  
 TATGCTGTCTGATATAAATATTGGAGAGATTAACTCTTTGAAATATAGAAGCTTTTGTCTTTTAAAT  
 AGTTGTTTTTTGTCAGATGTTAATACATTTTACGAGTACAGTATGGCCTTTTTCAGGTTAAGGTGCTGAG  
 CCCAAACCTCAAGAATCACTGCAAAAGATTGGATCCCCCTCTTACCCCATTTTCTGTAATTTAGTTAG  
 TGAGAACCACAACCTGGCTAAACCTTTGTTGGGGGGCGGGGCTGTTGCTCATGCCATATAATCCAGCACT  
 TTGGGAGGCGGAGGCAGGCAGATCACAGGTCAAGATCGAGACCATCTGGCTAACACGGCGAAACCC  
 CGTCTCTACTAAAAATACAAAAATTTAGCCGGCATGGTGGCAGGTGCTGTAGTCCAGCTACTCAGGA  
 GGCTGAGGCAGGAGAAATGGCGTGAACCTGGGAGGCGGGGCTTGCTGAGTGGGCGAGATCCCGCCACTGCAC  
 TCCAGCCTGGGTGACACAGCGAGACTCCATCTTAAAAAACAACAAAAACAACAAAAAACAACAAAAA  
 CCACCTTTGGGGGGAATATCAAATAAAACAACCTCTTTTAGAATTTTACAACCTTTTATGTTAGGAAA  
 AAACAAATACATTTGTGAAAGCTTAAATCCAGTAAATGACTTGAGGAGCTTGGGGCAATCCTAGGGTG  
 ATGAGGAGCAGGTTAGTAACAGTGAAGGACTTAGCACCCAGGGGGCCAGAGGCTGTAATATACCTTATG  
 AGCAAGTCATTCTTATTAGTCTTGCCCATTAAGAAGTCTACTTGGAATAATGCTTTTAAAAATGCCCT  
 TTTAATTTACTATTAAAGAATATTCTAGCAGAAGTAGTCTTGATGCTAAATCTATTTTAAAGATAA  
 CTAATAATTAGAATCTGTTCTTTTACACCTGTTACACACACACCCCTACCTAGTGTGTCGAATCA  
 GTTGTGATGGGCTCACCAAGCCTACTGTTCAATTTTTCAGGAGTTTGTAAAGCCATTGTATGTCAGACAA  
 GTGGCCTGAAGTTGTTATGTTGGTGGTATTACACCATGAAATTTGGCATGTTATGGTGGTAGTATTTA  
 ACCATGAAACCTGCTACAAATAGAAATCTTTTCTTCTCTTCTTGAGAGCCACTTGTGTAACACTTAC  
 CAGCTCACTGTGCTTGAAAGTATTCTTCTCAATAAATGAAAGCTGGTGTAGCTTTGAAATTTTGTGA  
 TAAAGTTTACACGGGAAAAAATAAACTAATTTTTTTTCCACCTGTGTTTTCAGGGATACGAAAAGA  
 CCGAAGAGGAGGAGAAATGTTGAAACACAAGCGCCAGAGAGATGATGGGAGGGCAGGGGTGAAGTGGGG  
 TCTGCTGGAGACATGAGAGCTGCCAACCTTTGGCCAGCCGCTCATGATCAACGCTCTAAGAAGAACA  
 GCCTGGCCTTGCTTGGAGCGGACGAGATGGTCAGTGCCTTGTGATGCTGAGCCCCCTACTCTA  
 TTCCGAGTATGATCCTACCAGACCTTTCAGTGAAGCTTCGATGATGGGCTTACTGACCAACCTGGCAGAC  
 AGGGAGCTGTTTACATGATCAACTGGGCGAAGAGGGTGCCAGGTAAGAAATGCGAAGCGCAGCTTTTAA  
 AGTCAATAGCTTTTCAAGACTTGTGTGATGTCATGGGAGAAATAGTGGGGGAAAAAGAACCAATAACA  
 TGTATGTAATTTGGTTTCAAGGTTACAGGAGATGTTTCATTTTTCAGTATCAATACACTGTAAATTTTCCA  
 GGAGATTAGGAATAATATTTTAAATCAGAATCTAGAAGACTGAAATCTTAAATTGACATAATTTATT  
 TTTAACCCTATCTATTACCAAAAAGATTAGGGTGGACACTACATGTTAAACTATTTAATAGTGTATG  
 TTCACAGTAGCAGAACTTTTAACTAAATGAATACAAAGTTTGTAAATTAATGACCTTTGTTGAA  
 AACATCTCAATTTATTAATCAACGATTTTATCTTAAAAAGATTTTTAAAGATTGCGTGTGGTGGCTCGTGC  
 CTGTAATCCTAGCACCTTTTGGGGCTGAGGTGGGAGGATTGCTTGAGCCAGGAGCTTGAGGCCATCCGG  
 GGCAACGTGGCGAAACCTGTCTCTACAACAAATTTTAAAAATAGCTGGATGCACTGGCACACACCTG  
 TGTCCCGATTATGGGGGAGGCCGAGGTGAGAGGATGGCTGAGTCCAGGAGGTCAAAGCTACAGTGAAC  
 CATGTTTGTGTGGAGTGCCACTGCACTCCAGCCAGGTGACAGAGCAAGACCGTGTCAAAAAATAAAC  
 CACACACAAAAAGAGAAAGATCTTTATGGATTAAAAAGATAATAAAGTGTATTACTGAATGCCAATT  
 ATTTATCCAACCTGGTGTATGCTTAGTATTTAGGAGAAAGAGAAAGGCAATGAAAAATAAATTAAGGT  
 ATCATCCCTGAAAGAACTTTTAGAAGACACAGTGGCTGAAGTGATACCTTGTCTTCTCAGTTGATTCT  
 CTCAGAACTGGTGTCTGTTGAAATTTGACTGTTACTCTGTTATTCAGGGAGAAGAACTCAAGTTTGTGA  
 TGGCAACAAGACTAGAAATGACTTCTCCCTGCCCCAGTGTATTGTTTCAGGAGCTAATGTAGATAAAC  
 CGAGGCAAGAGAAAGCTAAATTTTTTCTGGGCTTATAGGTTAAATGAGTGATAGATTAGTTGGAGGT  
 TTTCTCATTTGTTTCTTTTAAATAGATGAAATTAATGTTTCTATGAAGCATGAAATGTTTATATGAA  
 ACTAAAAAATGTGGAGTTTGTACTGCAATTTCAAGGCTCACTGCTGTTATAGGCCAAGTGAACCTAT  
 GTCTGGCCTTAGAGAACTTACATGATTTTGCATCTATCAGTATATAAACATGTGGGCGGTAGAATAAGG  
 AGCCAGCAGTACCAGAACCCAGCCTTGTAGAGGCCACCTTTGGTGGTTGAGTGGTTATTAGTTTACA  
 TGAAGCATGGAGAAATAATAGGCAATGTAGGTTTTAGTGTGCTGAGTGGCAACAAAAATTTCTG

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GTCATCTTCAGAATGAAAAGTTTCTTGAGTACCTACATATTTTAGCATTTTCATATGAAGCAGATACAT  
 TATAAGTTAATTGTTGGAATCTAATTGTAATATGGCTGTAAGTTTTTCTTTATATTTGTTATTGCCTTG  
 TTCTTATATTATAGGGAAGAGAAACAAACAAAGCAAAGAACTAATGGTCATATATTTGAGAGCCA  
 ACTCTTGTTGCTGTTCACTTTTATTTTCTGTAAACATATATTTTCCCTTATGAAATCTTGGGAATATT  
 AGCTCTGGAGCACTGCTGAACCAAGTACAGACATTTTCATGTGTATCAGTAGATTCCCATCATGACATT  
 TTTATAATAATGTTGAAGAGCATTTTAAACAACTGGAATTAAGCTCAAATACATTACCAGTGGTTGAAGA  
 ATTACATCTCAATAATCTTCTGAATTTAGGAATAAAATGGAGAAGTCAAGGAAAGCCAAATATTATACACA  
 GGCTAGCAATAGTTAAATACAATTATTAAAGCCAGAGCTAGACAAAATTATGGCAATGAGATGTGTAAAC  
 AAAACCACTCTGTAACCTCATCATGTTCGTTTAAAGACCTGAATGATTCAAAAATCCTTAGACCAATAA  
 ACTATGTCTTCTTACTTGATAATTAATAAAGAAATATAAAGGCAAAAATGAAATTATATGTATGTGTG  
 TTTGTGTGTGTTCCATGGGAATACAGCTGTTGTAATCAAAGGCTACTTGCCTGACCAAGCAGAATAAA  
 AATAGTCATTGATTTTAAAGAGACTAAAAGTGAGGGAAGAAAAAGTCTTCTGCAAAAGCTCTACAGATG  
 GTTGTCAAACCTTTTCAGAAAAATAGACAAAGCAACATTTTGAAAAGGATTATATCTTTTATATATTCAA  
 ATACCATCTGTTATTTAAAAACATAGCCCACTGAATATCTGATATAGACAATATAACGTTTATGAGA  
 TAATAGATCTGCAATGCAATAATAATAGTAAAGTTTAAAGAGGAAATAAGCCGGGCACAGTGGCTCAT  
 GCCTGTAATCCCAGCACTTTGGGAGGCGAGGCGGGTGGATCACCTGAGGTGAGGAGTTCAAGACCAGCC  
 TGGCCAAACATGACAAAACCTGTCTTACAAAACAGTACAAAATTAGCCAGGCTTGGTGGCACACATCC  
 ATAGTCCCAGGTACTTGGGATGTTGAGGTGGGAGAATTGCTTGAACCTGGGAGGCAGAGACTGCAGTGAG  
 CCGAGACCCCAACAGCTGCACTCCGGCTGGGCAACAATGAGACTGTCTCTAAATAAATAAATAAAGAA  
 GGAAATAGTAAACGTCATTAGTAAGAAGATAGCAAAATTCAGTTCTAGAAATACCCAGAATTAGCTAT  
 ATGATACAAAACCTCATGAAACATTTGGATAATCTCAGAATACCTATCAATATAACAAAACATATGA  
 ATTGACTTCATTTTGAATGATGAATTTTAAACAAAATAGTCAATACTTTGGGCTTAGTAGCTCTAGAAG  
 TGCCTTTCTTCTTCTTTTAAATTAACAGAAATATTGTGAGAATTTTCAAATGTTGATGATTATAAGTTG  
 AATTTTCTTTTTCATTAACCCCTGGGCTTATTTTGTGACTTGATATGTTTCTCTACTCAGAATTAAGAT  
 GTGAAGAGCTTTGGGATAGAATGCATCATACAAGTGTGAGAGTCAAGTTCCAATCCATAAAGTACTTCTG  
 CTAGACCTGGATAAAGATGACCTTAAGAAATGATTTTTTCTCTTTGCAAGTTTAAAAACAACAGTAGCA  
 ACAGAATGACTGCAAGAGTGGTGTATTAACCTGACAAAAGATGTTTTTATAACACATACTATGTATCT  
 ACTTTTTGATATTTATCTATCGAGAAGACTTTTCTCTTATTGTTTGTCTGAAATTTGTTTATATTTAA  
 TAGGAATTTTATAGCCTTATCCCTGGGTAGAAATTCAGTTTTTTTAAAGTAGATAATTAAATCTTAATT  
 TACTATTATTTTACACATGGTGAACCTAGTCAATAAATGTAATATCATTGAGCTGAAGGTTAAAAAGGAA  
 AAAATATGACTGCAAGAGTGGTGTATTTTGAATTCAGCATCACACTCAATTGCATCATTTGAGTGGTTC  
 ATTCTTAGTTTCAGTGTAAATGAAATACATCTGAGTTTTTTTCCCAGAAGCTTGAATTTGTGTACCCAAA  
 GTGTCAATTTGATTTATTTGAAAGTTAAGCCCTTTCCAAAATTCACCATAATTTTACATGTCTCGAAAGCA  
 ATTTTATACTTCAAGTCTGTGCTATAGTTCTATATATTTTATGAAGATTTGGATAGATATCTAGCCCTGA  
 GTTTTTTATGCTTCTTAAATACTTTAAACCAAGTGTAGCAGCCTCATGAAGTGTCTGTCTGGGCACAGA  
 TCTGGGAGAGTGCACCTCAGAGTGTGGCCAGGAAGAGGAAAAGGGGAGGTTCAAGTGGCAGC  
 TTGGCTTCTGTGAAACATGTACCTTAACCACTTCTCTATTTTAGTGGCAAACTAGACGACCTTCT  
 CCTTCCCCTTCTGCGGAGTCCCCCTCTAATCAACACTCTAGAAGGCCCTTCTCTCTCTCAGTCTCTGA  
 CTCTCTCAGCTTATTCAGTTGCTTCTTCTGCTCAGTTTTTGGCCCAAGGCTAGGCAATCTCTCTCTTCT  
 TGGACATGTCTCCACCAGCCCAAGTTCAGATTTCTTGAAGTTTCTGTGTGTCTCGAGGATGCATGG  
 TTGTGTGAGTTATTCAGGGCTCAAGGCCCTTCTGTGTCTGTATTTCCCAAGGAATCCAGGAATTCACCT  
 CTCTGCCTCTCATCTCTCATCTTAAATGAGCAGATTTGAGCTCAGGAAGTGCCTGAATAAATG  
 AATAAATGAACAAATAGGAGGTTGTTTTGAAAGTCTTAATTTAAGAAGTCTCTGAGCCCTGTTACAG  
 TCAATTTTCCCAATAAAGTGAAGTCTCTTAAGGCTGTGACATTTCTCTTTTTCTCTCTCTCAAAATC  
 TACCTGTCTGTCTGATATCTCCTGACAGCCACCATAGTGAGATTCTATTTCATTTCCAATCTCTCTTT  
 TGTAAGGGACAGAGAAACAGCTAGAGAAATATGGAGCCATGCGCTCTGAGGACTTTAGCAGGCTTCACT  
 CTATCTGAGCTGAGTTTCACTTAGCGAATGAAATTTGAAATTAAGTGGGTAGGATGAGGTTTCCCG  
 GAGAAGGTGTAATACCTCAGTCTGGGAATTTGGGAGCATCTACAAGGAACACACTCAATTCTGGGAGGTT  
 CTGTAGATTTTCAAGATTTAGCAGGGCTTCCAGCACTCTGCTTCCCAACCTGTCTTGGACAGTAAC  
 CCTGCTCTCAAACTGTTGTGGTGTCCAGCATGCTTTGGCAAGGTAATGAAAGATAACATGACATGGACAT  
 ATGGGTGACATCTGAGAGATGACAGAAGTCTCTGTTAAGGACAAGATTGCCATTTAGATTTTGCAC  
 CCACTGTATAATAAGAGCCTTAGGATTGGGCTGGAATCGCCCTAGCAGGCATGATGGCAGCCCTCTGGA  
 CTGGCAATATGACGCTTTTTTGCAAGTGTTCATGTCCAAGTCACCCACCCAGCTTTCTACTGCTCCCG  
 TGGAGGCTCTGGTGAACGCAAGGAAGCAGCTGCTGTGACTGGATTTTTCTTTTACATGAACTTTGA  
 AGCCTCATAGATCTTATTTGGCTGGATGCTATTAACCTTTAAATATCCCTTTCTCATCTTGAGAGTAT  
 TTGAGAAACATGTCTGGGGCATTTTGGCCACCCTCTCCAGGTTCTGTGTCAGTGAGTGATATGGTTTGC  
 CTGTGTCCCCACCAAAATTTCTTGAATTTCCATCTGTTGTAGGAGAGACCAATGGCAGGTAGTTGAA  
 TCAATGGGAGCAGGCTTTTCCCATGTTCTGTGATAGTGAGTAAGTCTCAAGAGATCTGATGGTGTAAAA  
 AGGGAGGATTTTCTGACAAAGCTCTTCTTCTTGTCTGCCACCAGTGAGATGTGCCTTCCACCTTCTG  
 CCATGATTGTGAGGCTTCCCAAGCCAAATGGAACGTGAAGTCCATTAAGCCTCTTTCTTTTGTAAATG  
 CCTACTCTGGGATGTGTCTTTATGAGCAGTGTGAAAACAGACTAATACAGTGAGTCTGGGTGAGTGTGT  
 TTTATGTTGAACGTAGTGGACTTGTGGTGTCCCCAGGGCACCTGTGGGGAATGTTGGCTGTGGCTTTG  
 CTACTTCCAGGGGATTTGGCATGGAGAATGTGTGTTTTAAGTAATAGATAGATTGATGAAGTGTGT  
 TATGGGCTGAGTTGTCTCTCTCAAAAAGACATGTTAAAGTCTTAACCCAGTATCTCAGAATCTGACC  
 TTCTTTGGAAATAGTGCTTTATATAGGTAATCAACTTCAAGTGAAGTCATTAGCACAGCCCTAATCCA  
 ATAAGGACTGGCATTCTAATGAAAGGGGAAATTTAGACATAGAAACAGACATGCACAGAAGAAGATGATA  
 TGAAGACACAGGAAGAGGACGGTCACTGTGACTGGAGTGTGGTCTGCAAGCTGAGAAATGCCAAGGT  
 TTAAGTGGCAACATCGGAACTAGAAGGGGCAAGAGTGGACTCTCCCCCTCAGAGAGATATGGCCTTGA  
 TTTTCAAGCTTCTAGCCTCCAGAACTGTGAGGCGTACATTTCTGTTGTTTTTGAAGCCACCTAGTTTTTGA  
 TACTTTGTATGGGAGCCCTAGGAATTAATACAAAGTGTATTAATAAGAAATTTTCTTCTATTGATTTT  
 TGAGGCAAAAGAAATAAGGAGCTATTGATTTAAGGAGGAAGTTTGGCTCATCTAGTATAGACTTGGCTA

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ATCATTTACTCTTGTATATTTCTCTTCTGCCCTGCCCAAGTAGTTCACCTGAACAGGCTTAGAAGTTGATTT  
ATAATTGTAAGAGTTTACACATCAGAAGTTAATTTATAATTGTTAACAGTTTCATGCATCTACCTCATAA  
ATACCTTGTAAGAGATTTTACCCTTCAGAATAATGTTTCTCTGGTACTTTAGTAGTTTATCCTTTTTT  
TGATCTTTGATGCATTTGAATTCATCCTGGTATGCTGTGTGAGCTGGGGCTCCAATGTCGTTTTCCTAC  
AGATGACTCCACAGTTGTTTCGGTTTCATTTCGAACAGCCTCCTACAGAAGTATTTTTCAGACTCTTTTA  
TACTTGGACTTCCAAGTTTACTACTGTTAAGAGCTTTTAAAGTAGGGGAAAGATATGACCCATTGGCCT  
ACTCGTTTGATTTATTTTCCCAATTCTGAAATCAAAAATTA AAAAATTTATTCAAAGTTATAGTTTCACT  
TAATTTATATTAAGTCATAGATAGTGTGATTCTCTGCTGCTGGACATATTTAGTAACTTTTAATT  
AATCTTAGAGATAAAAGATAGAAATCTATGAGACTTGAGACATTCAAATAAGACCAGTACTGATAAGAGG  
TAATCAGGTGAAGTGCCATTTGGTTGTAATAGGACATCAAAATTTGTTCCCAAGAGTGAAGGATGTTCCA  
TTCTCAATTTTCCCATCTGCTCCTCCCAATTTCTTCACTCTTCTGATGCTTTGAACCAACTTGAAAGT  
TAGTCCACTCAGAACCTCAGCTGTTAACTTTTAGCCTCTGCAACAACTAGCCGTTTTCCTCTTTGTC  
CCTTTACCATCAAGCTCAGTTGCTTCTCCTACTCCTCTCCCTTCTGCCAGGGGCTCCACCCTTGTCTCTC  
ATTCAACAGTGAATCATCTGTGCTCTCTCTCTTACTGTGTACCATTTGGGTCTCTCTTCTCACCA  
TCTCTAAATTTATGCTTCTTCCCTGTTCCACTGTCAACAGCTTGGTCTACATCCTACTTTGATCATTGG  
ATTTAGGTCCCACCCTAATCGAGTATGACTTCATCTTAACCTTGATTGCATCTGCAAAGACCTGATTTCCA  
AATACGACCACAGTAAGGTTTCAGGTGGACATGAATATTAGGAGAGACAGCACTTCAATTAACAGTTTG  
GCATTAGGACTTTATATCTAGCTTAGTAATTGTTTTAACAGATAAATAATAGTATCCCTAAAGTTTAA  
AATGAGAACCAGATCTCTTTTGAACACTCAAACTGCTTAGCAATAACATTTTGAATTGAGTTTGTCT  
CACAGAACAAAACTAGTCTTGGTCCAGAGTATCTTGCAAGACTGAATCAACTGTGGTCTAAGACACAA  
TAATAACTCTTAATTTATTTCTTGTCTCATGTTATTTGTTGCTGGATGATGAGTTTATATTATG  
GTTGAATTTCTTTTGAATGAAAAGATGAATAGTCTTTATTGGCTGGGTATCTATTTTATCCAGAAG  
ACTTTGCAACTGCAAAAAGATTTCTACAATCTGAGTTTAAATTGCTTAAAGCAATGAACCTGTTCTTTAAA  
GTCGTATATGTCAAAAATAAATTTAAATTAATAAATCATATTTTAAATGTAGTCAGGGTAGCTTTCAATT  
AAATAAACCTATGACAAATATCCACGTGAAGGTATCACTCCTTTAAACAAAACAGTGTCTCTCTTTTT  
ATTGAAATACTAGTTTTCACAAATTGAGATTCTTAATGTGATGACCGCTTGGACTGACTATAGTATAGC  
TGCGTTCTTTAGAAATGGCCCTGAAACACACAAGGCCCTTCCAAGATGCATGTGGCTGACTTTCTGAGGTGAC  
TGCATTGAATCTTTCTGGCTTAGCTTATTCTGCATCCAGATCCCTGGAAGCTATTTATCCCCAAACAGTG  
GTATATTTAGACCCATTTGTGTGCTAACCTCTCTGTGCCCTAAGTACCAACATAGCCAAGCCAAAGTTCGA  
ACTTTGCTGCCCTTACAATGGAGGTTACATCGTAGTGATGAAAGAGGTTAATTTCTTTAGGAGTTGAAGA  
CCAGAGAACTGCAAAAAGGGGAGAAAATCAGTGTGGCCTCTAATGAGAGCTAAGTGAGTGAGGCAATAGA  
AAACAGTGAGGACCGGCCAGTGCGGTGGCTCATGCCTGTAATCCCAATACTTTGGAAGGCTGAGGTGGGC  
GGATCAGCAGGTCAACAGATCAAGATCATCTGGCCAACATGGTGAAACCTGTCTCTACTAAAAATACA  
AAAATAGCTGGGTGTGGTGGTGGGTACCTGTAGTCCCAGCTACTCGGGAGGCTGAGCGGGGAGAATCGC  
TTGAACCCGGGAGGCGAGGTTGCAAGTGAAGTGCAGATTGCGCACTGCACTCCAGCCGAGTGAGACTCC  
GTCTAAAAAAGAAATACAGTGAAGACCTTGGAGGGAATCTTACAGTGGAGCAGAATTAAGAGAGA  
AGAATTCACCTATTTCTATATAACFCCCTGTAAACCGATAACTTTCTAGAGAAAGCTCACTGAATATA  
TTTGAATTTGTTTCATACCCTTTTATGTTATTGCCCTCTTTTACAGGAACAGAGACTCTAACCTGT  
AGATTTGCTTTGTTTCTTTTCTTTAGACTACAGCCTAACTGACTGTTGATTTTGGCACAATATTATAC  
ATCTCTCCTTTACCCCGCCTCTAGCCCTTTCTTAATTACCCCATTAGGCATTTTCTTGTAGCGTGA  
ACTAAATCCCCTGTCTCAAGCAGCGCCTGTACATTGAAATAGAAATGTTAATTATTGACGAAATTAAGT  
GTTCTTGATTGGGAACCCCTAGTTCAGGGAATCTTAAGGTTTCAATTTCTGTTGCCTTGGTTACTAACT  
GTTCTAGTCAGTTTGTCTCAACTTTGAATGGATACTTCTCTTAGGAACATTTCTCCTTTGAAGTAAATTGC  
TTGACGTGTTAAATCTAAGTTCTGTTTACAAATCTTGAGACAAATTCACCATGATTAGTTTAAAAA  
CAAGTGCCCTTGTCTTTAGTCTAGGATTTATCACTTAGCTGTATCTAGCAAAGCCCTCACACAATAG  
TAGGAAAAAGCAGAAGTGTGATTGCTAAATGAAGGGGAAATGTAATAAATGATGGAAGTGCCCTTTTT  
AGGGGAATTAAGTTTCTCTTTGTAGTGTATCATGTATTCAATTATGTGACTTTTATAAATACAAACCCC  
AATAAAACGGTGGGCAGTTCCGCTCTCTGGAGATGTTAAGTGTCTCTTATAGAATAACATGGCACATCAT  
AACATTTGATTCTTTTACCTGGTCAAGATGTTTGCTTATGGCATTGAAATGCATATTTTCAAACCTAGG  
TAGATGAATGGTTTAAATATAAAAAATTCATTCAAGGCCCTGAGCTATAGAAGAATATCTTCCAAAACATG  
CATTCAGTTCTATGCTGTCTGCTGTTTTCTTTTGTGATCAATAAGGCAGCAATGGAATACAATCAGATTT  
ATTTTTCTTTATTGCTGTCTACAATTCAGAGATATAACCTGAAAAATATGTTGTCTCTTCCCAAGTAGA  
TCTTGTAATTTCTGAACTGTGATCCAGACCAATGCCGCTTTACATTGGGTCTGTGGAAGTGGGAGGGT  
CCACTGAACCTGGTTATGAGAGGTTTCAAATGAAAGAGTTTACAAGTATGTAATAAATCAAATAGTC  
AATTCAATCTAAACATATACATGTCAAAACACATAGCCCCAATCTCATAAAATCAAAGAGATCTACCTAA  
ATAGATTTGTTTGCCTAACAAATAGCAAGACCCTTTGACAGAATCTTTAGCATGACAGTGATTGTCAAA  
ATGGGTAAATGGTTATTATTGCCAGTTAAGTAATTTCTGATTTGCTTTGCCCTTGATTACTCTTAATAAA  
CTAACTTAACATACCATAGAAGCAATATTTTAAAAAGAGGGTATATTCTAGAGCTAGATAGGGTGT  
GTGCAAGCAATGGAATGTAATGTAATTAACCTGATACATAAAAGGGTTGAAATGGTAAATTTTA  
TGTTATATACATTTTACCAAAATAAGAAAGTTATAATACTTTCCGTAGCATATATAAAAAAGAAACAG  
ACATTTTCATAGCAAAAATAGGATAAAAATGATATTAATTCATAGGGGATTTCTCTTATCTAAAACCTTA  
GATTTGATTCTTAGATAAGAATATAAACACATTCGAAGAAGATAAATCAATAAGCCAAATGAAGTAAGGTG  
GAATAAATAAATAGAAATAGGTGATACTTGGGCTCTGACAGCATCTGATAATAATAGTACAAACAGTTT  
CATTTCAATTAACAGTTATTGATGAACCTCCTGTGTGCTAGGAACCTGTTATTTAAAAAAGTAACCTTTA  
TTTTAGGTTTCAGGGTACATGTGCAAGTTTGTATATAGGTAACTCATGACTCGGGGCTTGGTACACAG  
ATTATTTTGTCAACCCAGGTACTAAGCATAGTACCAACAGTATTTTTTTTCCGAACCTCTCTCCTCTC  
ACCCCTCCTCAGTAGGCCAGTGTCTGTTGCTCCCTCTTTTGTCCATGTGTTCTCATTATTTAGCTC

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CTACTTATAAGTGAGAATATGCATTATCAGGTTTTCTGCTTCTGTGTGCTTGTGCTAAGGATAATGGTCT  
CCAATTCATCCATGTTCTCTGAAAAGGACATGATCTCTTTCTTTGTTTTATGGCTGCAGTGTATCCAT  
GGTGTATATGTACCACATTTTCTTCATCCAGTCTACCATTGGTGGACATTTAGGTTGATTCCATGTCTTT  
ACTATTGTGAATAGTGCCTGTAATGAACATACGCGTTCATGTGTCTTTATGGTAGAACGATATATAATCCT  
TTGAGTATATACCCAGTAGTGGGATTCCTTGGTTGAATGGTAGTTCTGTTTTAGTTCTTTAGTTCTGT  
GTGTGAAAACACCCAGAGAAACAAAATTGACCAGATCTCTGCCCTCACAGAACGTTTCATTCTACTGTACC  
AGTTATTTTCATGAGGAATATGAATACTGTTATTACTCTCTGCCCATTTACACATGAAGGAGCAGAAATG  
GAGCAGAGTTTACTAATTTATCTGTTGCAGATAGTAGCTAATTGTGTGCCAGGTGCTGTTCCAAGCATTT  
TACCCCTGTTAACTCAGCTGAGTGCTTTATTTTCCCATTTGTATGCCCACTTATGGATGACAGCACTG  
AGGTAGAGAAAGTTAATAACATAGAATAGTTTAGTATTAGGGAACAATTTGAATTCAGGACACTTTT  
ACTGAACTTAGCATAGGCTAAAGAAGTGTCTGTCATGTTTAAAGAGTTGTATCATTTTATCATTTATT  
GACTTTCTTTTCCAAAAAACAACCCCTCTCCTTTCTCTCTCTTCCATGTGACAAATACATGTCTGTAT  
ACATACATATATATAAATATAAATATATATATAAATATAAATATAAATATAAATATAAATATAAATAT  
ATATATATATAAATTTTTTTTTTGGAGTGGAGTCTCACTCTGTGGCCAGGCTGGAGTGCAGTGGCATGA  
TCTCGGCTCACTGTAAGCTCCGCTCCTGGGTTTCATGCCATTTCTCTGCCCTCAGCCTCCCGAGTAGCTGG  
GACTACAGGTGCCCGCCACCACGCTGGCTAATTTTTTTGTATTTTTTAGTAGAGATGGGCTTTCAGTGT  
GTTAGCCAGGATGGTCTCGATCTCCTGACCTCGTGTATCCGCCACCTCGGCTCCCAAAGTGCTGGGATT  
ACAGGTGTGAACACACAGCTGCGACCCACATGCCTGTATATTACAGCCGTTGAAGGACACAACTTTTGCC  
ATTGGGCGACCCAGTCCCTAGTAAGTGTTCAAAAATATTGCTATTATCATTTGTTGGTGATTTCGAGGA  
TTTGGATATAATTAATTTGAGCCTAATTTTTTAAGACTATTACATAACTATACAAAAAATCATGAGAGA  
GCCTGGAATTTTGCAAACTAGGATAGAAACAGTTTCTAAAAAGCATTTTAAACATTTCAGCTTGTGTAT  
TTCTTTTCACTTGATTTTTGTGATCTGCCCTCCATGCTTTCATGCCCTTCTCTTCAAACAATCTTATTACC  
ACTAACCAAAAAACAATTAATAATTTGATTTGTTTTGTTTTGTTTTTACATGTTGTACAGTTAAGAAAAA  
AATTCTAGGTATTGACCCCTGCCAGTTTTCGGAGTTAATATTAAGTGTGATTTGGGGCTACATTTAAGT  
GCTTTAAGCTATCCTACAAGCTTAAAGTAGTATACATGCAAACTACTTAAATGAATTAGGTACAAGAATAC  
AGAGGTAAAGAAATAGAATCTATTGTAGAATAAATCCTATTTCAAATGTGACTGTTTTAGGATTGAATCA  
ACCACATATTACAGAAACCCCAAGATAAAGCCTTGGCATAACCAAGACAAAGTTATTTTTTTCTCTCA  
CATAAAATTAGTCCAGACTTATTTTACCAGTGGTATGGCAACTCCACAGTCAAAGGGACCCAAGCTCATC  
TGACCTTCGATTTCCCTTATCTGGGACAGGCTTACATTCTCAAGGTGCTGCTCCTGGCCTAATGGGGCTAC  
TGGAGCTTCAGCCATCACACTCTGTGCTTCTGTTATATCTACTGGTCAAGCTTCAGATACATCTGTCT  
AAAAGGAACGCTGAAAATACAACTTTAAGCTGTGCAATTGTACCTGGAATAAATGAGTTCTTTTAAATA  
AAAGAGTTGAATGGATATTGGTGGGCAATAGCAGTCCATGCTACAATAATAAATTCACAATTTTAGA  
ATTAGATATCTTGTAATGAATATTCTGACGTGGTGTCAACTTATACCATAGATAGATTATAACTTTGAAA  
AGGAATTAGAACACAATAATAAATTCACACTAAGGCTCTTTTGGGAAAAAATCTCTACCATTTA  
TTGAGTGTTTTATTTATCTTCAACAATCCCTATGAGTTAGGAGCTATTTTTGTGGACATTTTACAGATAAA  
GAAACAGAGGCATTGAGATGATAACTAGCTTGACTAAGGAGTGGCGGAGCTCTGGGCAGTGTGGTTCCTG  
TGTGCCCATAAAGCCATTGCACAATGCTGCTTCATCATGTAATTGAGAAAGTATTCAGGATGTGGCAGT  
TGGTCAATGATGATTTTATCTTGTGTTTCTTGTGGCTTTGTGAAAAATCTGGTCATTCAAACGATTTGACT  
GTTGAGATTTCTGTGCACATGAGATTGTACTGTGTACATGTTTCTAAAAATGTATTTATAGATCAAAATG  
CACACACTCATTTACCTCTAAGAACAGTTCCTTATATTGAAGGGAATATCTGTACATGAGAGAACAACG  
TGGTTTTGAGTACAAGTGGTGAACAGACATTGAATAGTTGTTTTGAGAAAGCATCACTCCCTGTACCTC  
AGAACCCAGCCTCAGTCTGGTGTGCGAGCCAACAGCTTTGATGTCTGAGTTTGTGCATCACTTCTCTT  
TTGCCCCCTCTTTGGGATCAAGATGATAAGTTTGAAGTGGAGTTCTACCGCTTCCATGGAAGAGAAAA  
AGTTTCCGT  
GGTGTCTGCCATCAACAAGGAGAACAGAGTGGGATGAAGGTTTGGGAAGCCAGGATGGGCATCTCTGAGC  
AGCTCCAGAACTCTCCACCTAAGTGTGCAAGTGTAAACACTCCCTGATGTGTGAAGTGGCCATCTCAAGA  
CTAAGTATTTAGCAGGAAATGCCCTTATCAACCTTGCCTTCTCAGGTGTAGAGTTGGGTTGTCTCT  
TCCATCTTTGTTTGAATTTATGTCATTAATCAACCTTAGTGAAAGATCACTTAGTCATTTGTGACAGCATA  
AGTTCTTAATTTGTTAGGAATCACTGGTGGGCACACATCTTTTCTATCCATGAACAACGTCAAATGCTT  
ATTTTCTCATGAGCTTTATTTTTTCTTTTAAAAAAGTTTCTTAGGATAAACACAGCCTTTTTCTCTTG  
TCTCTCCTTGGCCTCTCATCTTTTTCTCAATCTTTATATTCTATATGTCACTGAAGAGTCCCGTGGC  
AACGCTGTGCAGTGGGAGGCTCCTACCTCCACCAGCTTTTGGAGGAGTTGTAGTCTGCAACCTTAGAGG  
TTCCACAGCCAAGCTGGGGTCTTTCTGGAGCATGGGTGGTGAATCTGAGATCTATGACCCAGGAAGCC  
TGACACATTATTGGTGTCTCAATTTCTTTTTTTTAAATAGAAAAATGTATCAAATTCATTTGGGTG  
AGAGCAAAAAATAAAGTTGAAGTTGGTTGAGCTTTGGAAGACTACAAGCCATGTAATATTAAAGATTTCT  
GACCTCCAGAACTAACATTTGTCTGTGAGAGAAAATAATTACTCTGTTGAGAATACATGCATTAAGT  
AAGATGTTCACTACTCTATATGATCACCAAACATTAATAATATGTTTACACATGTATGTACTATGTGT  
TCAAGTGTTTATAATCCATGGAGCCAATAGAATGTAAGTTCTATGAGGGCAGAAATTTAATCCATTTT  
GTTCTTAGAACAGTTCTCTGACACATACCTGGTGTAGGGGTAGGTTCTCAGATTTTATGGATCAAATGGAA  
TCTCCACACTTAAAAAACTTAGAGAAAACTGCCCTAATGTGCCCATAGTCTGGTTGGAATGGCAGCT  
CCAGGTTTCATTGATTGCTTTGTTTCATTGCGACATTTTCACTGGACATGCTATGAGCCAGCAGTGTCTG  
GGTTTTTGGGATACACCAAGCCCTGCCCTCCCGGTGCTTAACATTTCTAGTGGGGGAGACAGAAAGAAC  
AAACATGTTGGACAACTTAATTTATCTATTTTGAAGTTGACAGGAAGTGGGACAAAGAAACAAGAG  
CTGGAGACAGCAGTCCAGGGCAGGTTGAGGTTCAAGTTAGAGTAAGCCTCATTGAGAGATCTTTTGGC  
AACACCTGAAGGGGGAGGTGAGAAAGTTAGCCATGTGGAGGGAACAGCATTCCAGGCAAGTGGCCACCA  
AGTGCAGAGTCTGACAGCAAGAGCAGTTCTGGAATATTCTAGAAACAGGAAGAACCAATGTGACTAG  
AGCAGAGTGGGACAGGATGAGAGAAAATGTGATCAGGAAAGTAAGGTTCTGTGGCCATTAAGATTTTGG  
CTTTTATTCTGAAGGAAATGAGGACTCATTGCAGGACTTTGAGAGCATGATCTGACTTGTCAAGTGT  
CTCTTTGTCTACTGGGTTGAGAAAGCATCCAAAGGGGGCCAAAGATTGAGGCAGGGAGAGCAGCTAGGAC  
AGGCTCTAGCAATCTAGGTGATAAATGAGGACCGATGGTGGCTCTGACAAGGGTGGTAATGGAGACATGG  
TGAGGAGTGACCACATTTCAAATATATCTTGGGTAGAGCTGACAGGATTTTCCCGATGGGCTGGGCGTA

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GTATGTGAGAGAAAGAATTACGTTATGGATGATTATTTTGTCTGAACAATGATAAAAGTTGAGTCAACA  
ACTGATATGGGGAAGTCTACAGGTGGAAACAAGTTTTTGGAGAGGAAATCAGTTCAGTGTTGGCTATGTTG  
AATTTGAGATGTTTTTAGACCATCTGAGTGGAGAAATCTGGAGTTTAGGAGAGAGGCTGGACTTGATATG  
ATGTTATGGGTCTCAGCATAGAGATGATGAATGGGATTAGCAAAGTAGTGAGCGTAAAAAGGAAAGGGA  
AGGAGACCAAGATTGAGCCTTGGGACAGTCAGAAAGAAGAGAGGGAACCCGCAAGGAGATTGAAATGG  
AATCCATCTCACTGTGGCATCGTGAAGACAAATGAAGATGGTATAAGATGAAAAAGTGATCAGCTGTAT  
CAAAATGCTGCTATTGGGTCAAGTAGGGTGAGAAATGATAATTTTCCATCTGTGCAAGAGCAGCCATGATA  
GAGGGAGGGGGTGGAGATATACTTGAATGAGTTCATGAAAAATGGGAGGGAAGGATTAGAAGCAGCA  
AGTATAAGCAGCTCTTTCAAAGGAGGAGATGGGGAATGGCTACTGGGATGCCATCACATAGATAGGAAG  
GTGGAACCCCTGTGCACCTGGAGGAGGAGTGTCTCACAGAGGAGGACAGGCAGGAAGGTAGAGTGGGCTG  
CTTTGGGCACATGTGGTTCTGTGGATGTTCTCTTTTGACAGCTTCAGTTCCTCAGGGAATTGGGAGCAAG  
TTTCATCAGCTGAGAGTGAACATGGGGCAGACAGTGTGAGAGGTCAAAGCGGCAAGAGTAGTTGTGCCACA  
GTCTTTTAGGAGAGAGGGAAAGTAAATGGAATGGGGAAGGAAAGTAAATAGCATGGCTGCTGAGCTGCGT  
TACAAGCCCAACCCGGTTGGTGTGGTGTAGGTGTAGTTGTGGGCTCTTCTTCAGTCGGATTGTGAGCATGG  
GCAGCTGGCAGAGAGTTGAATCTGACAGGCGAGCAGTTCTGGAAAATGAGTATGATGAGTCAAGAAAGGG  
ACCAGGAAGTGAAACTGTGTGTGAGGCAGTGATGCTGATGAATGACTGTGGAACAATGGAGGTGAGG  
AGGGAGTGGATGTTGAGTGGCTAGGGGACAGTGAAAGGGAGTAGGATCCACTAGCTTGTGCTGTCTC  
TTATAATTAGGATCAAGAGCTTCTGCCATCTCTAGGCATTCTGCTGCTTCAAGGGAGTCTCTGAGATTG  
GGTCTGCGATGGATGTTGAAACATGCACCTAGGTGTGTTGGAGTCTGCGCAGAGACCTGCTTCTCTCT  
TTATCTTATCTGAGGCCCTTTAGGAGGCTCAGATGGAATAATTTTATGGTTCTTAAACCCAAGTG  
GGTACCTAAGCCATCTAGTCTGCCCTGTTCCCTGAGAGGACCACGGGAGCACCTGAAATGGGT  
TTCCACTCTGCCATCCCCACTTGCCTGCTTGGGTGTTGACCTCAGCCATCTACACATATCCCGGATGTA  
GTGTTGGGCCCTGGTGTGATGTCACTTTTCAAATGGGATCTTTTACTACAGCAATCCAGCAACAAC  
TAAATAGCGATAGAGTTTTCTTTCCCTTACAAACCACAACCACAACCAAGGGAAAAACCAACCAACCA  
ACCAAAACAAACAAAAAAGTATGTGGCTTCTTACCACAGCCCCCTATCTCGCCCAAGCCTTGTGGCTC  
TTTGATCTCTGGTGTCTGAAATTGCGTAATCATGTGCTTGTCTTTTCATTTCATTGTGCTGGGCACAC  
ACCTTGGAGCCCTGGTGTGATGTCTTCTTTTATGGGGTAAGGGTAGGCAGGACTATTTTTTAAGATT  
CTTCCACTTTGTCTTCAATGTCTAATGAGTTTTTAAATTTGTGCCTGTCTGTTTTTAAATTCCAA  
GAGATATCTTTGTCTCTAAATGTTCTTATAAATATATATAAATGAATAATATAAGCATATAGTTTT  
GCATAGATTGAGTTGCTGTTACAGTGTCTTTTATTTCTGAGGATATTCATTATAGGTTTTTAA  
AAACACTTTTTCTGGTGGCCCAAAATTTATCTCTCTAGACTTCTTCCATTTCATGCTTCTTCCCCC  
TCCCTCCCTTCTTGTCTTGTCTTGTATTTGGAGGCTTGTCAATAATTTGACCATCCATTCAATTT  
TTTAACCATAACGAACATAAAATGTTAATTGGAGCCCTGTGTGTTCCCTTGAGCAGAATGTTGGATTAA  
GAGCTTCCGTGCAATGTTTTCTCTGGAATGGATTAATTTCTCCAGATCTATAATTTTCAATCTCTTTCC  
AGGGGGTAAAGCCCTGATGTCTGTTTTCTATGAAAGTAAAGTGGGTAAGAGTGATCCAGCATTCCAGA  
ATGCAGACTTAGTAGCTGCTGTTTTAGTCTCTGGGACTTCAACCACCCCTCACCACAGTTGGTATCCCAA  
AGTGTGAAACFCCTTAGATTATCTTCTCAAGAAAATGAAACTCAGATATTCGTGTCTTTGGCCATTTT  
TGATTAGCTTATTTGTTTTCTCTTTTGAATTGTTGAATTCCTTATGATTTTGAATATTAACCCCTT  
ATTAGTTTATGGTTTTGCGAAATATTTTCCCCACTCTGTGGTTATCTTTTCACTTTGTCAATTGTTTTAC  
TTTGCTGTGCGGAAAGCTTTTTAGTTTTCATGCTATCAAATAATTTTGTCTTTTGTGCTGTGCATTCAA  
GGTTGTATCCAAAGAACTCATTGCCAGATCAATGTCATGGAGCATTTCTCCTATGTTTTCTTCTGATAT  
TTATATAGTTTCAGTGCTTTTCTTTAAATTTTAAATCCATTTTGAATGGATTTTAAATAGGGCATAAGTGT  
CACTTCCATTCTTCTTATATGTGGATTCAGTTTTTCCCAACACCATTTATTAAGAGGCTGTCCGTCTCC  
TATTGTGATTTCTTGGCACTTTTGTGTAAATAAGATGATCTTACTTGTGTGGGTTTTATTTCTGGGCCCT  
CTAATCTGTTTCATTAAATTCATGTGTCTGTTTTATGCCAGTATCACACTGCTTGTATACAATAGCTTT  
ATAATATATCTTGAATCAGAGAGTTTGATGCCTCTAGCTTTGTTCTTTTGTCTCAAGATTGTTTTGGTT  
AATTGGGGTCTTTTGTGGTTTCCATACAGATTTAAAGATTATTTTCTATTTCTGTGAAAAATGGCATTG  
GAAATTTGATAGGAAGTGCAATGAATCTGCAGATCACTTTGGATAGCATAGATTTTTTTTAAACAATA  
ATTTTCCACATCCATGAAGAGGTATACTTTTTTCATTTATTTTGTGTTCTTCTATTTCTTTATCTGTA  
TTCTGTAGTTTTTAGTATTCAGGTGTTTCACTTCTTGGTTGAATTTACCCCAAGTATTTTGTGTTGTT  
GCTATTTGTAATGGAATGTTTTCTTAAATTTCTTCTTTGGATAATCTTTATTTATATAGAAAAGCTA  
CAGATTTTTGCATGTTTTATTTGTATGCTTCAACTTTACTGCATTTGTTTATCAGTTTTTAACAGTTTTT  
TGATAAAAGTTTTGGTGTCTTCTGTATATATGATGATGTCATCAGCAACAGAGACAATTCATTTCCCT  
ATTTTCTTCTTTTTTTTTTTTGGAGTGGAGTCTCACTCTGTCAACCAGGTTGGAGTGCAGTGGTGGCAT  
CTCCGCTCACTGCAAGCTTGCCTCTGGGTTACACCACTTCTCTACCTCAGCCTCCCGTGTAGCTGGG  
ACTACAGGTGCCCGCCACCACGCCAGCTAATTTTTTTGTATTTTGTATACAGACGGAATTTCACTGTGT  
TAGCCAGGATGGTCTCGATCTCCTGACCTCGTGATCCACCCGCTCAGCCTTCCAAAGTGCTGGGATTAC  
AGGCATGAGCCACCGCGCCCGCCCTATTTTCTTAATCAGCGATATATACAGGCTTGTTGAAAAACAT  
GAAAATGGTAAAGAAAGTTTATGTATTAAGAGGCAAAAGCTATGATGTTCAACTCCTCTAAACCACTCT  
TAGTAGGTGAACATTGTTAAACAGTTTTTGTGAATCTGCTTCCAGATTTTTTCTAGGCATGTTTCATACACA  
TATACACACATAATTTATTTTACCCAGTTGCGATCATGTATCATCTGATCCAAAACGCTATTTTCA  
GTTAATATGCAAGTACTGCTTTCCAAACCATAGTATATATATATCTCTAAGAATTTTCAAATCTGC  
TATAGTTTTTAAACATATTTATGTTACATACATATGTATATAAGTTACTTATTTGCTTATTTCTTTGAA  
TATCTTTGTCTAGCTTTGGAATCACATAAATAAGTACAAATGGTAAACAAATTTTCATGTGGAAGGAT  
ATATAGAAAAGTACAAGTCTCTCTCTCATCCACTCTATCTATTACCTAAAAGGTTATCCTTAGAGCT  
TTATATAATACACCCCTGAAGTTTAGATCATTTTATTGGCTCCCAATGTTGAGAGTAAGGAATTTAGTA  
CATATACCTTTCTTCACTTTCTTACCCTCTACCTACTTAATGAGTTCGATTATAGTTTTTCAGTTTAC  
CCACTGTTAAATAATATACCTATATTTATAATATACCTATATAATATACCTATAAATAACCTATATTTT  
GACTTATCAACTTTGGACATATCTATTGGTGACTTGTGATGAGAGATGAAATAATTTGTACATTTACCT  
TCTTTTCCATTCTTTTCCCTTACCCTTCTCCCTTTTTTGGCTAAATGATTGCTTTTAGGTTGATAAGGT  
TTATAATAGCTACTGTTCTGTGGTTAATAAAATTTGTTTCATATTTTATGTGAAATTTGATTATACAACT

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AGCATTCAAACATTATTATGTAAATATTAGTTACTGTAATCACACAGTGACGCTCAAGGAGGTATTTAC  
TAAGCATACAGATCATTCTCTGGATCCAACTCAGCAGTCCTTTGCTGTGCCCTTACCTCATCTTTCTGTG  
GATTCCTTTTCTTTTATTGCAATATATCCTTGAGTAATTTTTCAGAATCGATATGTACTGTCTGAACTC  
TCTTATACCCAAAAATTTGCTTTTACATTTGCTAATAGTTTGACAGAGTATAAAATTTGCTTTCAAAT  
TCTTTCCCTTCATGGCTTTGAAGATACTGCCCACTATATATTCTAAATCCACTGCTGCTAATGAGAA  
ATTCTGGTGTCTGACTCTTATTTCTTTCATATCACTTGGCATTTTCTTCCGAGAAAATATTACTTA  
TCTTCAGAATGATGAACCTTCTCTATCATGTCTCTAGGTGTAGGGCTTCTTTCAATTAATCCTGTAGGT  
CCTCAATAGGCTTTTAAATTAAGTCTCATTTTATTCGGGCTCTGTGAAATTTTTTGTATGTTTGGCT  
TCTTTTCTCTTTTGTGTCTCTCTTTTCTCCTTGAATGTCTTTCTGATAGATATAGCATTTCCCATTTATC  
TATCATGTCTTTAGATTATCTACATTTTCTCTTTGTTTCTTTTCTACCATGTTTAGAATTCTCTT  
ACACGTAAGACATCACTGCAAGATCTTCTAGTCATATCCTTTTATTATTCAGTCTGTGCATTTTAAAT  
TTCAATTTTGGCAACCACATTTTAAATTTCTAAGAATCTATTTTGTCTAATAGTACTTTTGTCTGAACT  
TTTTATATCCTGCAATATTTAGAAAGAGCACACCTTATCCACAGCTGATTAGGAGTACACTCTGAATGC  
AGGGCACGATGGGCAACATTTTGTACTGGCCTCCTCAAGCCTCAATGCCAGAAAGTTATTGCCCTCCAT  
CAGAAATGCTTTTGTCTCTCTCACTTCCAAATGAAGTTCCAGCTTAATTTTTGTCTGTCACTGTA  
GTGGGACAAGCAATCCCTATTTACGTGATCATTGCTCAAACCTCTATTGACAATCCTGCTTTGCATTC  
CCTTATTTAGAGTGGGATGGAAAATAAAGGCTATGAAGGGGAAGAATCTGATCCACCATTTCTCCTTT  
TCATTTGCAAGTTTCTCCTGTTTATGGATGCAATAAGCTGTTGCAATCTCTCAGGATGGAAAAGAATTT  
TTAAATCTACTCTGCAAGATGATCTCTTTTAAATTAATCTGTAAGTTCTGGGATACATGTGCA  
GAACATGCAGGTTTGTACATAGGTATATACGTGCCATGGTGGTTTGTCTGCACCCACCAACCCATCATTT  
ACATTAGGTATTTCTCTAAATGCTATCCTTCGCCTAGCCCTCACCCTTGACAGGTCCCAGTGTGTGA  
TGTTTCCCTCCCTGTGTCCATGTGTCTCATTATTTCAACTCCCCCTTATGAGTGAGAACATGTGGTGT  
GGTTTCTCTCTTCTGAGTTAGTTTGTGAGAAATGATGGTTTCAACTTCATCCATGCCCTGCAAGGAC  
ATGAGCTCATCTTTTATAGCTGCATAGTATTCATTGTGTATATGTGCCACATTTTCTTTATCCAGT  
CTGTCTTATGATGGGCATTTGGGTTGGTTTCCAGTCTTTGCTATTGTGAATAGTGCCACAATAAACATACG  
TGTTCTATGTGTCTTTATAGTAGAATGATTATAATCCTTTGGGTATATACCCAGTAATGGGATTGTGGG  
TCAAATGCTTTCTGTGTTCTAGATCTTGAAGAATCACCACGCTGTCTTCCACAATGGTTGACTAATTT  
ACACTCCCAACAGTGTAAGGCAATTCCTATTTCTCCACATCCTCTCCAGCATCTGTGTTTCTCTGAC  
TTTTAATGATTGCCATTTCACTGGCATAAGATGGTATGTCGTTCTGGTTTGTATTGCAATTTCTCTAA  
TGATCAGGGATGATCAGCTTTTTTCTATGTTTGTGGCCTCACAATGTCTTCTTTTGAGAAGTGTCT  
GTTCATATCCTTCGCCCACTTTTGTGATGGGTTGTTTTTTTTTCTGTGAAATTTGTTAAGTACCAAAA  
CAGATACATAGACTGATGGAACAGAACAGAGGCTCAGAAATAACACCACACACCTACAACCATCTGATC  
TTTGACAACCCGACAAAAACAAGAAATGGGGAAGGATTCCCTATTTAATAAATGGTGTGGGAAACCT  
GACTAGCCATATGCAGAAAACCTGAACTGGACCCCTTCTTACACCTTACACAAAAATTAACCAAGATG  
GATTAAGAGACTTTACTGTGAACCTAAACCATAAACACCTAGAAAGAAACCTAGGCAGTACAAATTCAG  
GACACAGGCATGGGCAAACTTCTCATGACTAAAATACCAAAAGCAATGGCAACAAAAGTCAAAATTGAC  
AAATGGGATCTAATTAACCTAAAGAGCTTTTGCACAGCAAAAGAAACCATCATCAGGGTGAACAGGCAAC  
CTACAGAATGGGAGAAAATTTTGCATCTATCCGTCTGACAAATGGCTAATATCCAGAATGATCTCTAT  
TTTCAATTTCTTGCATATTAATCACTTTTGTCTCTTGTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
TGGTCCACGGTGGTCTATTTGTAGGGTTCTATTTTACAAATGGGAGTCAAGGTGACTCCACTACAGTTAT  
GTGAAAAAGTTTCCCTGCCATGCCCTCTCCCTACACTGGGCGAGCTGATCTGGTTCCGGGTGAGTGGATGG  
AGCATTTCTCTCGCAGGCACACCTTCAGGCTGGTGGGAGCAACTGGGCCATGGAGTGAACCATGTCA  
ATGGAGACAGACTTCTCTGTGCGCAGCTTCTGGTCTGAGAGCTGGCTGTTGATTTATTTGATCCCTCTTTC  
CGTCTGTGGTAAAGATCTGGAGGTTCTTAAGCTCTCTCTGGCCTCAAACCCACAGCAGGAAATTTCTCT  
ACTCAGATCACCCACATTTTGTAGCAAGCAGAGCTTCAGTTTGTAGTGGAGGCGAGGAGTATTGGGCACTA  
GGGAAGGACAGCTTCTCTACGCCGTTCTGAATGCAGTGCATTAATAAATCTCTTCACAGTTGCTCCAG  
GGTCTTTTGCATTTGCTGAACCTTCTGGCTTCTCAGGAAGAACCTGGTTACCTCTGATGTGTGGGTGTTGT  
TCCATCTACTCTAAATTTCTGTGCCAATCCATCCCATCTGTTCCTACCATTGGTTTATTTTAAAAAATA  
TTTTATATTTATGTAGATTTATGAACCTGATTATTATACCATCATAGAGTTGGGTCCAGAGTCAAACCT  
TCTATAAATCTGTAATCAAAATTTGGCCTTTATTTTCATGTAGAAGGAAGTAGCAGACCAAAATGGAGTT  
CTATATTTCCATTTTCTAAATGAGCCTTTGAGATGTAGAGCAAGCAAGTGCCCTTTTGGGGAATGTGTG  
TGTGTGTGTGCACATGCAAGGGCATTTTCCCATGTCTCCCATCCTTAAATTTTCCAGTAGACAGTGG  
GCCAGCAGCAGGTGGTGGCATAACTTCTCCATTTGCAAGTGTGTGGCTGTGGTGGGATCTGAACAGGAGG  
CAACCTTGGCAACAGTAGGAATAGAATGTGGAGTCAAGCAGGAAGCGCTTTTCCCTCCCACTTACCTGTCT  
TCTTGATAGCAGACAGTGGCGGCACTTCCGCTGACTTGTCTAGCCTGTTTCCATTGTGAGCATAAAC  
ACCTTAGACGTTTTTTCATTTTCCAGGACTGGAGCTTGTGAAATTAACCTACACTCATTTGTCTCAGGCA  
AATCTCCTAATCCTATTCTGTCTTTTGT  
TTCGCTTTCCCTTTTAAACACAAACAAATTTTTTTTTTAAATTTTAAATGAACCTATTCTATTGCCCTCCCTA  
TGTGTCCCTCCTTTCTAGTGATATTGCCGCTGTTTCTTCCAGCTGTCTTGTATTCTGTACAAGACTC  
TTTGTCTGGGCTTCTGCCTTCTAGACGCTTACCTTCCCGTTATTTCTTCCCTCTGCCCGGAAAGGCC  
TTACCATGGCTCTGATGATGATGACAGCTGACCCCTTTTCCAGGTGGAATCCACGTTTGATTCTCTGATC  
TTGTAAGTGGCTTAGCAGTGTCTGGCATTGAGTAATAAGGTTAAGGAAGGCCAGTGATATACAGTAGT  
AGAAACAGCAGTAAATGAAGGCTTGTCTGTGACAGGTTCTCTCCTCCAGGATGACAGCATCTCTG  
TCTTTCTGTCTAGCATACAAGATAGCATCTCTGTCTTTCTATTGCAACTTCCAGGTGAGAAGCCCTCCC  
ACAAGCATATACAAATTTTATGAAACAGACAAAAATTTGTAGGGGAAGCAAAATACCTTCAAGGTTGAGTC  
TTTCTGGTCTTCTAGAAGGTAAGCTTGGTGATGGGGCAGTCACAGCCCTAGTGCTTATGGAACCTTGGCCC  
TTTTGGGACAGCATTTCACTTAACTAAAGAAATGCTATGGCACAGAGTACCTTGAATCTCTCTAATTTAT  
GCTGTACAGGGAATTTTACACTTTTATTTGTTAATAACACATTACATGGGGGAACACCAGACAGCTGACC  
AGGACTCCTGTGTCTTGAAGCTTCTGTCTTTCAGCAGGGCAGCCAGCCTTCTCTCGGTTTACACAGAGC  
TTTTATTCTCTCGCTCTCTTAACTCCTGTTCAAGACAGTTTCCAATTTCTGTTGAATTCATCTATTTA  
CCTCATCTGTGCCTTTCCCACTCATCTCTCCCTTCAGAGTGCCCATTTCTGTGTTTCAAATCCAC

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AAGGCCAAGCTTAGATGCTATTATGTCTATGACATTCTCCACCTCTATCCCAATAAAAACCTTTGATTTT  
ATCTTGCTGTTTGTATCTTTACTCTGGTATATTTTACCACATACCAGAGTTGTTTGTGGACATGCCTGATT  
TCCTTCAGGCTGTAGGCATATTTGATTCATTTTTGTACTCCATGAGTGCCTAACATAGCATCTTATACAC  
CATAGATAATTAATAGATGCCTCTTGGCTGCATTGTATTAAATTTTTACCATGTACTTGTCTAGCTAG  
CAGAGACTTGGGGGAAATAATGATGACTGATTTTTACTTATTTATTTTATTTTATTTCCCATAGGTTTT  
TGAGGAACAGGTGGTGTGGTTACATGAATAAGTTCTTTAGTGGTGATTCTGAGATTTTGGTGCATCC  
ATCACACGAGCGGTGTACACTGTATCTAGTTTGTAAATTTTTTATCCCTCACTCCTTTCCCTCCCTTTCT  
CCCGAGTCCCCAAAGTCCATTGTATCATTCTTATGCCTTTACATACCCATAGCTTAGCTCCCACTTATGA  
GTGAGAAATATATGATGTATGGTTTTTCATTCCCAAGTTACTTCACTTTGAATAGTGGTCTCCAATTCCAT  
CCAGAACCCTCAAAACCATGCAAAACCATGGAACAAAACAGCCTGCTCCTGAATGATCATTAAAGTCAAC  
AATGAAATCAAGAGAGAAATTTAAAAATTCCTTGAGCTGAATGATAATAGCGATACAACCTACCAAAACC  
TCTGGGATACAGCAAAAGCAGTGTCAAGAGGAAAGTTCATAGCATTAAATACCTACATCAAAAAGTCTGA  
AAGAGCACAATAGACAACTAAGGTCACACCTCAGAGAAGTAGGGAACAAAGAACAAATCAAAACCCAAA  
CCCAGCAGAAGGAAAGAAATAACGAAGATCAGAGCAGAACTAAATGAAATTGAACAAACAACAACAATA  
AAAGAAGCTAAGTGAACAAAGGCTGTTTTTTTGAAGAGATAAATAAATGGATATAACACTAGTGAGAT  
TAACCAGGAAGAGAGAGGATCCAAATAAGCTCAATTAGAAGCAAAACAGAAGCTATTATAATCAATACCA  
CAGAAATACAAAGATATTAGAAGCTACTATGAACATCTTTACACACATAAACTAGAAAACTTAAAGGAG  
ATGGATAAATCCTGGAATATACAACCTCCTAGGTTAAGCCAGAAAGAAATAGAACTCTAAACAGAC  
CAATGAAATCAAGCAGGATGAAATGATAAATAAATAAATGCCAAACAAAAAAGTCCAGGACCAACAG  
ATTACAGCTAAATGTATCAGACATTCAAAGAAAAATTGATACCAATCCTACTGAACTATTCCACAAG  
ACAGAGAAAGAGGGAATCCTCCCTAAATCATTTTATGAAGCCAGTATCACCCCTAATACCAAAACAGGAA  
AGGACATAACAAAAAGAAACTACAGCCCAATATCCCTGATAAATATAGATGCAAAAAATCCTTAACAAA  
ATACTAGCTAAGTGAACAAAGGCTATCAAAAAGATAAATACTATGATCAGGTGGGTTTCATACCAG  
GGATGCAGGGATGGTTTAACTTCAAGTCAATAAATGTGATACACCACATGAATAGAATTAACAA  
AAATCAGATGAGCATCTCAATAGATGAGAAAAAGCATTGACAAAACCTAGCATCCAATTTATGACAATT  
TTTAAATATGGGGAATGGTCTTCATGGAAAAGTAGATGTTAATGGCACCTGTATTAGGGTTCTCTAGAGG  
GACAGAACTAATAGGATAGATGTATATAAAGGGAGTTTATTAAGAAGTATTGACTCACACGATCACA  
AGGTTGGGTTCCACAATAGGCCGTCTGCAAGCTGAAGAGCAAGGAAGCCAGTCCAAGTCCCAAAACCTCA  
AAAGCAGGAAGCCAAAGTGCAGCCTTCAGTCTGTGGTTGAAGGTATAAGAGTCCCAAGCTGAAGAAC  
TTCACGTGAGAAATTCGAGGGCAGGAAGCATCCAGCATGGGAGAAAGATGTAGGCCAGAAGCTAAACCA  
GTCTAGTCTTTCCATGTTCTTCTGCCTGCTTTTATTCTGGCCATGCTGGCAGCTGATTAGATGGTGCCCA  
CCCAGATTGAGGGCGGGTCTGCCTTTCCAGCTCACTGACTCAAATGTTAATCTCCTTTGGCAACATCCT  
CACAGATACACCAGGAGCAATACTTTGCATCCTTCAATCCAATCAAGTTGACATTACATATTAATCATC  
ACAGCAACCAAAAGATTATCTCATTTAATCCTTACAATAGCTCTGTGTAGTGGGTATATATTTTCTTTT  
GCTGAGAGAAAGTAGGCTTACAGGGGTGAGTAATTTGCCAGAAATACCTAGGTAGTAGAAGATAGTAG  
AGCCATTATATTCTGTCTGCATTCAAAGAGTGTGCTGCTTTATTTGTTCTGAATTGCACACAAGCTAA  
AGAATACAACTGGATGTTCACTCTACTCTATTTTGATAACTTGGCTAACTTTACTGCAGAGTCTGCAGA  
GGTGACCAATTTTACTCTGGGAGATACCAGGGAATCCGCCATGTAATTCCTCAGGCTGAGTGTGTTGGAA  
ACACAAGAGCTGTGCTATTAAGTGTATTTTCTGAGAGTCTACTATGCTCCCACTACCAGCCTC  
CGCAGGCCCTCTGTCTACCCCTTTTCTGTCTGATGTGTTCTAGCAGGCACTGAGAAAGTCATTGTAGAA  
GTTACCATGACTTTCCAATAGCTTCCAGAAGCAGAACACAATTTACAGGAGGGGCAATAAGTATGAATG  
CCACCTTGATAGAAAGTGAAGTTTGGCTCCTGTTGAACACTCAGTAAATGCTTCTGAAATAGATGCAGG  
ATTGAGCAAAAGCTATAGTCCCAAGCTTACATAATTGAGTCTGAGGCTGCTGCTGCTGCTGTTTCTG  
TTACTTCTGTCAGGTACCTAAAGGGTGTGTTTTTCTGATTTTCTGCTATTGATTAAAGCAGAGGTTAGTA  
AATTTTTCTGTAAGGCCAGGTAGTTAGTATTTAGCCTTTGTGAGTATTGGTCTCACAAAAGCAGCC  
ATAGATGATATGTAATGAATGTGCATGGCTGTGATCTGATAAACTTTATTTAAAAATGAGGGGTCATC  
TGGGCTGTGGTTTTTCAACCCCTGATTTTAAAAACAAAAACAAATGTGCTATGCCTGTAGATGCTACTAC  
ATTTGATTCTGTGTTTTCCATATTTTTCTAAATGTACTGAACAGGAATGAACAACTGATGACACAAT  
GATCTAATTTAATCATTGAGATAAGAGTGGCGCCAACCTCTTATTGAGTATTGTTATGTGTGTCAGGCACTT  
GGCTAAGCACTTTACATGTTTTCTATGATTTTAAAGCAAAATATTGTTATTATCTTCATTTTTTGTCTGA  
GGGAAGGAATGCAATGCAAGCCAGCTTACAGAGGCTGCCGAGGTACACATCACCAGTACACTGAACAA  
CGTGGTCTGATTACAGGATCCATGATCTCCTGTACAGATCATAGTATATTGACCTGAGAGGAAAGAGCC  
TAGGACTTACAATCAGAAATCTGGGTTACATTTCACTCCGTTCCATGCCAAATTACATTAAAACTGGG  
CCTCACCTTTCCACCTGTGAAAGAGGAATAATACTAGGACTTGCCCTCCCAACCTTAGAGATTGCTGTG  
AGGATAAAAAGCCTATATGAATGTGCTTTATAAACTATAAACCCATACAAATGTTTGTATAAGTCTGCC  
ATTTGAATACATCTTAGTCTTTTTTCTATGTGAAATAAACATTTTAAAGCAAGCAATGAAATCTTG  
AAACTATAACAGGTTTTTAAAGGGTGTGATCCCAAGCCGCTTCACTATTTTGCTCCCTCTCTGACTC  
GCTCTGTCTCTGCCTAGCAGCGCTAGTCTTTTCTACGTGTTTGTCTGTTTCTGTGTTTAGGCCCCT  
CCCTACTACACAGCGGAAGTCACTATTTTTTCTCTTCTGCTGCTGAGCAAGATTAAACTCTTT  
TCACCTGGACTTTTCTAGATTACTCAGGCTGGGTGGAAATGGGTTAGCTGTGAGGCTGGGATGTTACTG  
TACAATTCAAATTTATGATCTGAACCTTAACTAGATCTTGCTGAAGATTGACCTGGCTAGCAGTTTGA  
GGCACCTATCTTTCACTCCCTCTGCTCCTTGGCCCTGGCCACTGGCCACATGTTAGTAGCTTACTTCTA  
AGGATGGAATGCCATGCACTCCTACAAGGTTGCTCTATGCTTACACAAGTAAAGAAATGGAGGCA  
CTTTGAATGCTGCTCATTTTCACTCAGGCAATCCCTTTACAATATTGTGCTTAGTAAACTCCCCCACTC  
TTTTTTTCCCTTAGCTTGTTTTTTTTTCTAATAAAAGTCTATATCAATTTGATGTATTAGTTAGGTTCT  
TCTGGAGAAACAGAACAGTAGGATCAATTGATTGGTCAATCAATCAATCAAGACAAAAAGAGATTCACT  
TGAAGGAGTTGATTATGCTGCTTGGCTTGGCTAGTCTGAAATGTAAGGCAAGGCTGGCTGACTG  
GAAGCTCAGGCGGGATTCTCTGCTGCAGTCTCAAGGCAAGATCCGCTCCTCTTGGGAAACCTCAGTCT  
TTGCTCTTAAAGCTTTCAATTGATTGGATGAGGCTACACACATTATGGAGAATAATCTGTTTTACTTAA  
AGTCTACTGATTGTAAACATTAATATATTTAAAAAGTACTTTCACAGCAACATTAGACTAGTGTGTA  
CCAACAACCTGGGCACCGGCTCAAGCCAAGTTGGCATATAGAATTAGCCAGCAAACTTGGTATTCACAAT

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CTGTCATTATAGTCTTGTCTATAAACCTAAGGTTTAGAGAAACGCTGGTCATTCTGAACAATTCCCTGTG  
 AATGCAGAGATCAAGGAGCCTCCCTTAACCTGGGTAGGCAGTGTGAAATACCTGCAGTGTGCTTGACCTT  
 ACTGTTACCCACTGGCAGCTGTTCTACAGCTTGGCTTCAGATATATAATATTACATTGGCTAACTTCA  
 AAGAGCATTGTTTTTCCAAGGATAGAGATGGTGATGGTGATATTACTTTTACCAGCCCCAGACCTGTAAG  
 AGGTTCTCATCTCTTTTGTTTAAGATTTTGTGTTTTTTTTTAATGCTCAATAAAGAAGCTTTATTCTT  
 TCATTAAAAACAATCTCAGAAAGAACAGGGAAGAAGAGGCTAGCCTATGAAAGTGATGTTGTTATTGA  
 TACCATCGTGACTTAGCTTGTTCACCTAAGACTCTGAGATTCTATTCTGTTTATGTGAGATTGGGCT  
 GAGTTCACTACTATCCATATTAACCTGAATCATAAAACAATTAATCCATCATCTGGTTACATTTTGGTGG  
 GGAGGGAGCATTAAACACAACACTAAGCCACATATTTCACTATTTTTTTTTTTTGGCAGCAAAATTGACTTA  
 ACTGCTTGTCTTACACCATGCCATATAAAACCTTTTGGTTTATAGAGGTTCTATGTGCTCGAAAGTACA  
 GTGAAGTATCTCATCAGAAATAGTATTAATATTCTTATGACATTTTCATATGTCCTGATATGGGTTAATGG  
 AGAAATATCATAAGAGTAGTAATTCTCTTGCTGTTATTATTGTCTCTATTAGACAAACAGAACATAGAA  
 TTAATAAGAATTCAAAACCTTTAATCACTGATAGAGATTAATGATGTTTATATTAGTCATCATCACCTA  
 ATATCTTAAATTTTAACTTTTATGCAAGTGTGGCTCTCTACTTGGGTATGCCCTTAACAGTAAAAAG  
 TGTGTGAATAATGCTCTCCCTTTTGGCACTCACAGAATTGCTATACATATATGTATAAAATATATGTAAA  
 TATAAAATACATAGTTAAAAAATAAATCTACCACATAATATAGTAAGGGAGTTTAAACTGAGGTTTT  
 TGAAGTCTTTAAGAATTTATTTAGAGACTTCTTTTGTGGAAGTATGGTGGCTAGATGCCATGAAAAACC  
 CACTGTAAGAACAGTGTAGTGCTAGGTAATATGTTGAAACATATCTTTGAAATGTATTACTGAGCTGGC  
 AAGAAAGTATGCCATTGTAGAGAGTGAATAAAGTGAAGGCAGAACTCTGGGAGGTGAAGCCAGCCTGAAG  
 ATATTGATGACACTGGATGGCCTTAAGTTTCCATTTTGACTGGCATGTAATCCAGCCAAAGATTCCACA  
 GAAATCCGAGGTTCCAATGGTAAATCCGTGGTGACATTGGGGTGACCGAGAAATGAACCTCTGTGTAGAA  
 AGGAATGGTAAACAACACTTGTCTGCAACCTTGGCTCTGGGTAGGGGAAAGGAAAACAGCTTCTTAGA  
 GAAATGTTAACCACAAGCTAGCCCTCATGAGAGATTTCAGCTAGGATGGATGCTATCTGTGTAGTGCAAA  
 AAAAAAAAAAAAAAAAAATCCATAGCCAGATTTTGTGCTTTAATGTGGACCTAGGTCAATAGTGACTGCAAA  
 GCCAGAAGCAGTGGCTCACCCCTGTAATCCCAGCACTTTGGGAGGCCGAAGGAGGTGGATCGCTTGAGGT  
 CAGGAGTTTCAGAGCCAGCCTGGCCACATGGTGAAACCTTATATCTACTAAAAATACAAAAATGAGCCTA  
 GAGTGGTGGTGGTGCTGTATTCCCACTACTTGGGAGGCTGAGGCACAGAATTTGCTTGAACCCAGGA  
 GCGGAGGTTGCACTGAGCCAAATCGCACCCTGCATTCTAGCCTGGGCAACAGAGTGAGACACCCTCT  
 CAAAAATAATAATAAAAAAAGTACTGCAGGGGACTGGGAAGGAAACACAAATCTTTACTGGGG  
 AATGGAATTTCAAGTGATGCAACCAACCTTAGAAATCACAAAACATCTGACCCCTCTGAAAATAACCA  
 CATGAGTGAGACAGCAGGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAGAAAAAAG  
 CAGACTCATACCTACAAAACCTTAAAAATTAATAAAATGAATCAGACTCAGAGGCTTCAGAGTTTGATTT  
 AAATACATTATACAAAACCTTCTGTGTGAAATATGTTTAAAGTGTAGAAGGGTGCTTGAATGCACAAAGT  
 CAACAGCTGAAAAATGACCAAGCAGATATGAAAAATTAATCCATAGAGGGCATCTGGAATAAAAAAG  
 TATAATAATTATAGTGAATAAAGTTTATAGTGGGTTAATTAGTAGAATGGATATAGCAGAAGAAAGATT  
 TAGTCAACTGAAAAATATATCCAAAGATAGGTCCAGAATTAAGCTTAGGGAGATAAGAGATGGTCAAT  
 ACGAACATTAGGAGACATGGAGAACAGTGACGAAGGTGTAATAAATCTTAACCTGGAGTTAAAGAGGAGA  
 TAGTAAAGAGGAGAAAAACACAAAACCTCAAAAAATGAGTGGCTGAGAATCTTCCAGAAGTATTGAAA  
 GACACCAATCCACAGATTCAGAAAACCTTACAATTTGCAAGAAAAAGTAAAAAGAAATTCACACCAAGATCC  
 ATCTTCATGGACTGGCAGAGCATAAGAGATGAAGAGCTTATCTTGAAAATGCAGCCAGAGAGAAAAGGTC  
 TATCGCAGTTAAAGGAAGAGGCAAGCAGATGACTGAGTTCTCAATGCCAAGTGAAGATGAGAAGCCAGTG  
 GCACACCTTCAATATGTTGGGAGAATATAATTTCAACTTAAATAGTGTACATTGTAAAATTACATTTT  
 AAAAAAGAGGGTATGTTAAGAACAAAATGTTTAAATTTTAAATATCCTTAAATGATTTTAGGAGAAAATGGACAT  
 AATATACAACATTTCTCTCTTTATTATTTTATTGATGACTTGATATGTTTTTTTAAAACTCAGTAAATAA  
 ATGATTAGTCTCATATATCATAAGAGAGTTATGCCCTTATTTTAAATGCCATAAACTGTGACTTCTGAAGA  
 AATACAATCATATAAAATCATATTTTAAATTTACTTTTGAAGATGTACAGTAACTCAGGAAGGCAGAGTGT  
 GGAACCTGCTTTAATGAATAGATAAGAATGACTAGCAATTAATAATTAATATCTATAATTTCTTCTGAAG  
 TTCTTGAAAATAATCTCTTCTAACCTGGGTAAATATCTCTCTTTTTCAGAAATGTTTGCAATGTTGCTTT  
 TTTTAAATTAATCTCTTTTCTTAGATAATGGAACATAAATCTTAGGCACATTTGCTTTGTAAATACCA  
 AATTGCACACAGATTAAATTTAATGAGCTTTTACTGCTGTAATCTCAACAAGCAGAGTCTTGTCTGTTG  
 GTTTTTCAATAAGAAATACTTTATTTTGTATACAGTGGTCATTAGAACCTTAAAGATAATCAGGACAG  
 ATTTTCAAATTGACATAATGCTATTGCCTAGCTATTGCTATGATTTTTTTTTTAAATGACAAGACATTTTCG  
 TTAATATTTACTTGGCTGACGTTGAAGATTTAGACAAACAATGTACTTCTAGTTGTCACTTTTTTCAA  
 AAGATTCTTAGGGAAAAGTTAGCCGTTTTGTTGGTTGGTAAGTGATGGGTTTTCTTGAACGTTGTGCTT  
 GCTAATTTTACCAGAGAGAAAAATAAATGTAAGTGAAGCTACATTTCAATTTGTTATTTCTTCTTCTTAA  
 GTCCTCCCTGTTTGCATTCTCGGATTTTGACACTCTACACACCAGTTAAAGCACTTGTAGAGTGTCCA  
 AAAAATTTGTGCAATTAATTTCCAGTCTCTCTCTCTTTGATGTGCTACTATAATGCTTTGAGTAATTT  
 TCAGTGTCTGGCATCTGTTCAAGGACAATTTCTGGATTTTAGGAGGGGAGAGCAATAAAGGAAACAAC  
 ATATGTTTTTTTCCATAAATAGGAGGCATTTTTTGTGTTGTTGTTGTTGAACAAAAATCGAAAACCTTTCTTT  
 TATATAGGTGACAAAAAGATACAGCACTATTGGTTGTTAACTACCATTGCATTTCTTTCTTTGGAGT  
 AGCCCTTAAGGACCAGATTAGACCAGCCATCTGCATCATGTAGCATGTCTGGGTTACCTTTCCCAAAGA  
 AGTTCAGATAGATGAACTTGCAACCCAGAGCCATCTGAAGTTTGTTTTTTCTTTTTTGAACAGAGTCTC  
 ATTTCTGTTGCCAGGCTGGAGTGCTGTGGTGCAATCTCAGCTCAATGCAACCTCCGCTCCCGGTTCAA

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CGCATTCCTCCTGCCTCAACCTCCCAAGCAGCTGGGACTACAGGCACGTGCCACCACGTCCAGCTAATTTT  
TGATATTTTATAGATAGACAGGGTTTCAGCATATTGGCCAGGCTGGTCTCAAACTCCTGACCTTGTGGTCC  
ACCCGTTTTGGCCTCTCAAAGTGTGGGATTATAGGCATAAGCCACCACGCCAGTCCATCTGAAGTTTT  
AAAATGGCTGCAGGTATCTTAGTAGAGACTAATTTTATTTTCCAATGATTAGAAAAAATGACCAGACC  
AAGAATCTAGGGTTATGTTTCATCTCATATCCTGTGCAGGATGTTCTGAGAAGTTTCTATTTGTATCTG  
TGGAGTGGTTCTAGTCTTGTTCATCTTGCATTTTAAGGTTTGGAGGTATTTATCTTGCTTGTCTCTTT  
ACCACCTTGCTTTAATTTCCCCCTATATTGCCATTTCTAAAGTAATGACTCATTTTCAAGGGTGGGCTG  
AAAGGAAAGAAATAATAAAACCAGAGATCTGGAGCAGTTTCTCGTTTCATGGTCTTATTCACTTTTTAATA  
AGAGCATCTAGAACAGTGAGTGGTCCCCAGCAGATATCTGGAATTTTGTGGAATTGAATTGAATTTG  
TTCTTAGAATAAATGACAATAAAGAAAATAGTATTATGGAACITTCGACCCAAAGGAAATATCAAGGCT  
AAAGTTGCTATATTTCTTTTCTTCTGATGATGCTGAGTTTTTCTCTTAAAAAACAATCCACATTTAA  
ACATAAGGCATTGTTTGTATGGCCTATCACATTAGTAGAATGGATTGAGAAATACGTGTAGGATGCCATA  
TTAAAAACTCTGTTTTGAAATTAAACCTAAGACTATAAGATTGCTGTGTTAAAAAATATTGCTGCTGT  
AATTGTAGCAAACTGAACATATTTGAACTTTAGAAATTCAAATGTATGCAATCTGTAAATATAACTTAC  
TCCATCCGTAGACATAGTTCTTTTGTCCACCTGGCTTCCAGCAGTTTGTCTGTCTGTCTATTAGGCTAAAC  
TCTTCATGTTCTCTAAACATATTTTCTCTCAAAGGGGACATATTTCTTGGGTGAGATGTAAACATCAAGCT  
AAGGAGTTCTGCTGTGCGCTAGACAAATAAGGTTTCAATTTTCTCTCTCATAGTGTAAACTTGAATT  
TAAGATCACACAGATTCTTTACACGTTACCAATGTAATGATATAGACAATCTCACTTTATTCATTCAC  
CTGTTTAAATTCATTCATAAAAAACGTATACATTGGCTGCCTACTGTGTGCCAGTTGGTGAAGATATAAG  
ATGATTAAGGCAAGGGTCTGTGCTGACATGCCATAATGGGCAGGCTGACACACCTAAACGCCAGGGAAAA  
GAGGGATGAGACCTGGGCCTCTGAAGCCCTGGCCACCTGGCTCGAAGCTCACTTTAATGTCTCTGGGT  
GTATTCATGACTTTTTAAAGGGCTTATGTTTCTTTCTGGTAAAGCATGTTTAAATGCAAAATGCTT  
ATTTCTATGATGACTTTTTTAAAGGCTTATGTTTCTTCTGATAGAAATGCTAGAACAGTGTCTTCTAATAGAGTATA  
TTCAGGTCACGTAGGTAATATTAATTTTCTAGTAGCCACATTAAAAAGTAAAAAGCAACAGGCAAGTT  
AATATTTTTTTTTTCTGAGATGGAGTCTTGCTTGTCAACCCAGGCTGGAATGAGTGGTGTGATCTCG  
GCTCAGTCGAAGCTCCGCTCCCGGTTCAAGCCAGTCTCTGCTCAGCCTCCTGAGTAGCTGGGACTA  
TAGGCGTCCGCGCAAGTTAAGAAATGGGATCAATTTTGTATTTTGTAGTAGAGACGGGTTTCAACCGTTATCC  
AGGATGGTCTGTTAATTTTAATAATATATTCATTAATTTTAATAATATATTCATTTAGTCTATATAAAAA  
AATTAGCATTTCAACATGTAATCAATAGAAATATATTTAGTCAACTATTTTGCACTCTTTGTTTGTAC  
CATCTTTGAATTTCAATTTGTATTTTATACCTTACAGTGCATCTCAATTTAATGCTAAATGTCATCGGAG  
ATATTCGATCTCTGTTTAGCTTTAATATATTTTGGGTTGAAAAAGTAAATTCACATAACCAAGTTCTTCT  
CAAAATATACTTGAAAGTGTCTGATAACTGAGTTATCAACTTAAAAATGTAAGTTAATGACAATAAATG  
AAAGAAAAATCTGTTCTTAGCTGCACTGACCACATTTTAGTGTTCAATAGTCGAGGTGGCCAGTGGC  
TATCATATTGGATAGTACAGCTTTAGAATGACAGTTTCAAGTGAACAAGTGTATAATAGACTCATGAAC  
GGAGCTTCCGCGCAAGTTAAGAAATGGGATCAATGAAGTGGGCTTTGAAAAACCAATAAAAAATCCACAGCT  
AGAGAGGAGGAGGGCGACTACTCCAATTCATCTTTTGAAGCATGTGAAGGAGCAACAGTAGACTTCTT  
TAATTTAATAGTAAATTTATGAACATGAATATGGGAGGTGCATGGTGTGGGTGCTGGTGAGACATA  
GTTCTGAGCTCAAGTAGCTTGGTGTCTAAATATTCATGGGCCATTTTTCAGAAAGGATGGATATGTGT  
GTGATCCTGGGTGTGCGCAAAATGCTGTGGCTTCCGTAAGCTTAGATTTCAGCTTGTCACTTCAAGGTTA  
CCTTGTGAATAGGACTTTTTTGTAGCTGTAAGTAAATTTACTTTGCCTATTTATTTCCAATGGAAAAAAG  
CTTTTTTAAAAAATAATCTCATCTTATTGCTATGATTGGCCAAGACACATGGCCCATACAGAAGGTT  
TTTGATGGCTTCTGAGGTCTGTTATCATTTGCTTATTGGCATTTCAGCTGTCAACCAGGGTCTGTCAAA  
TTCCAGTTCCGCTGCTTTAGCTCTTTTCTGAATACCTGGGCAATGGCAGAAAGTGTGCTATTGTGCAC  
CTTTCCAGGATGTTAGTCTGTCTTGGAGCAAAATAGAAAATTTAAAGTCAGATGACTTGAATCTCTGC  
CAGTTAAGACCCTTAGAGAGTCTCAGCATGTTGCTTATTTTAAATTTCAAGTCCCTGGTAAGGATCAA  
GTAAACTCCCCAATTTGCAGATTTCTATCCAGTTGACTATGGATTTTGCTGTGCTTTGTTTCCACCAA  
CTCTCCCTGGAGTGTGGAGGCAACAGCACTGACAGGCAAGAACAGCCTGGTCCATCTTGAAAGAT  
TCTCAAGACTATTCTCCACAAGATAATGTCTACTTTTAAAAATATTCAGTAAAGGGAATTTTGTCTGTT  
ATCCTTGGTGTGTTTTTAGTATCTCATCTCTTAGTGTGAGGAGGCTTTTCTAACATCTAACCCA  
TATGTCTGTGTCTCATCAGGTGTTTCTATTAAGGCTACTTCCCATCAATCTTAATTTTTTTTTTAATC  
TTCTGAGATGATATAGTTAAGTTGAATCAGAGACTTTCATAAAATGGTAAGATGGCCATTTAAATGCAA  
CTATGAGGAAATAATGTAAGCAGGATTCCATTGGAGAACCAAACTAGCAACAATACTTGGTAATCA  
ATGTTGGGACTTGAAGTTAGGCTAAATCAATAGTAATGGCACTCGTATGTACAAATGCAGAACTTTTTA  
CACACAATGATTTTTCCCTCTGTTATTATACACTAGCTGTGTCTGAGTAGACAGTCCAGCTCCACTACCT  
GCAGTCCACCTGGGCTGTGTAATCTGAGCACTGATGGGCTGTTATTGTAGCTATTACTTCTATGACAC  
TGTTTTTTTATCTGTGTTAGAAATGTCTTTCTTTCTTGAATAAGCTGCTTCAATTTCTTATAGACAGATT  
CTGCTTTTATGACCTTGTGTTTACAAAGTAATCTCTACTCATGTGAAATCTCAGACAATTTTAAACAA  
TATTTAGAGTACTTAATTTTTCTTGAATTTCAAATATTATCTTCTTTAGTTTACCATAGTTGGATATT  
TTGAGATAACTGTGGAGGAAACAGCACTGATCTGGGGCCATGAAACCTGATTTCAGATCTAGTCCCTT  
CTTTAATTTTGCACAATAATTTAATCACATTCTCTTAAATTTTATCATCATTTAAATAGCAGAGAATA  
ATTTCCGTTTATGAGGTTGATATGCAATGAAATAGCATATCAATGTATGTATGAATGTCCCCCACATA  
GAGTACTACACAATGAAACGTGTCACTCAGCATAACGTTATGTGCTCTTCTGCAACTGGATTGCACT  
CCAGTGGGATTTTATGCTGTTGAGATGGCTGTGCTGCTGGACTTATGGGACACCAATCTTTGAAATAA  
GCCTGATCTGGCTGGGCGTGGTGGCTTATGCTGTAAATCCAGCACTGTGGGAGGCTGAGACGGGCGGAT  
CACCTGAAGTCAGGAGTTTGAACACGCTGGCCAACATGGTGAATCTCTACTAAAAATACAAA  
AAAAATAGCTGGGCATGGTGGCATGTGCTGTAATCCAGCTACTTGGGAGGCTGAGGCAAGGAGATCAC  
TTGAACCCAGGATGAAGACTGTAGTGAGCCGAGATTGCGCCACTGCACTCTAGCTGGGCAACAGAGT  
GAGACTCTGTCTCAAAAAAAGAAAAAATAGCCTCTAACAAAAAAGAAAAAGAAAAAATAA  
ACCTGATCTATAGATGAGGCCAGTGGATCTTGTGAAGAGTTGAAAGGTGAGGTATCAGTCTTATACCATG  
TCGGATGGGGCAATCGTCATAACTTTTTTAAAAAATATTTTATTTTGTGAGACAGTGTCTCACGCTGTC  
CCCCAGGCTGGAGTGCAGTGGCATGTTTTCGGCTCACTGCAACCTCCGCTCTGCGTTCAAGCGATTCT

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CATGCCCTCGGCCTCCCTAGTAACTGGATTACAGGTGTGTGCCACCATCCCTGGCTAATTTTTTGTATTTT  
TAGTATAGACAGGGTTTACCATTGTTGGCCCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCTG  
CCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGTGCCTGCCCCAATTGTTACAGCTTTTT  
AAGTGGATTATATGCTGCTTCAAGGCATTAGACATAATAAGTTAATCTGTTGATAAGTTTCTTCATTTCT  
TAATTTTCAGTTGTGTTTTGATGTGTGTGGTCTGGGTGAGCGGCTCAGTGCTGCTGCTGTGGAGAAGGCA  
TGATATGGAAGGATGTGACTGTCTTCTTCATCTTCATAACGGGGCCAGGACTGGGGTGAGGTGTGTGA  
GATGAATGAAGCACTGGTTTTGATACAAAATTTAAGAAAAATCAAATTCAGAGGTAATATTTTAATACG  
ATATTTGTAAAAAATCAAATTAGTGCAAAAATTTGTGATGAGCAAAAATGTTAGATAAAGGCATGTTGTC  
TTTCTTTTTCTGTGTATTGTAACACACCATCACTTAGTGAGAAACAGCTCTCACTTTCCCTCCTCCCA  
GATACAAACCATTTATGTTGAATTAACCTTCTAGTTCTCCTATACCTGTGAGCATCCCCAGGCCCTTGG  
TATGGAGAAAGCATTTATTTGTCTTAGTAAGATTATAAAGTGGAATAAAATGTGAATGTAATGAACA  
AAATGCACATTTTGTGGACCAACTCGTTGTTTTAGATCTATTTTTGAAAACCTATTAGGTATGTGCATGA  
GGCAAAATAATCAAGTGCACTTGGATATTAATGAAAAAGTGTCAGGTCCCCCTTTTCTGCCATATTCTC  
TTCTGTGCTTTCATTAGTGGAACCAATTTTACCAGTTCTTATAATTCTAATGATTGCTGATGGCTCTA  
ATTCTTGGTTTATCAACTTCAGCAGAATGTCTTGACATCTTGGTATGAAAGTTAAAGAATATGAATCAT  
TTGTTCTCTCCCTTCTCCTTCTCTCTCTGCTCCTCAGTTTTTGTGTATGCTCACGGAGTATGTGT  
GTGAGCATGTGTGTGTGTGTGTGTGCACGCGAGCAGTGTGTGTGTGTGCGCGCCCATGGGTCCATTTTT  
GCATGGCAGGCTTTGTTTTAGAAAGATTGGTTACAACAGCTGCCCCACCAATCTCCTCTACAGGAAGGA  
TTCTACTCTGAGACCTTGGTCTTTTCCAGGCAGATCACTTACATTTCTCAGAGATTATTTCTCATCT  
GCAGCCTGGGTCCAAATGGGCTTTGCTGTGAACAGTGACTCTCAGGCTTCTGGTCTCTGCTGTGCTTGAG  
TGTCGTTGAGATGCTCCATCTCCTCTACTGCACCCACCCAGCAATCATCTCTTTCAGGAATTACCA  
AAGTCTTTTTTAAAATTTATCTTTTGTGTTGAGACAGAGTCTGCTCTGTTGCCAGGCTGGAGTACAGT  
GGCGCAATCTCGCTCGCTGCAACCTCTGCTCCTGGGTCAAGTGATTCTCCTGCCTCAGCCTCCCTGAC  
TGGCAGGGAATACAGGCATGTGTCAACACACCCAGCTAATTTTTGTATTTTTTAGTAGAGATGGTGTTC  
CCATATTTGGCCAGGCTGGTCTCAAACCTCCTGACCTCAGGTGATCTGCCGGGGTCCATTTTACGTGGCAGA  
CTTTATTTTGAAGATAGGTTACGACAGTTGCTCCACCCATCCCCCTGCAGGAAGGAGTCTACTCT  
GAGACCTTGGTCTGTTCCAGGCAGTCTTACCTTCTCCTCAGAGATTATTTCTCATCTCAGCCTGGG  
TCCAAAGTGCTGGGATTACAAGCGTAAGCCACCACATCCGGCTCACCAAAGTCTTTGGGTGGTGTATGTC  
ATATGCCCTCCAGTTGATAGCACTTTTAAAGATTTTTCTCTTTTGTATGCTGTTATTATTTTGAAGGCT  
TTTGATTATTTATTTTAAAGAGTATGCCATGTCTATCTTTTAACTTTTAAAGCATCTATTGCTTTGTTAC  
TTGACTTTGATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT  
GTTGTTTGGGTTTAATTCAGGAGTCACTGGAATTTAAAGCCTAAACTCAGTATAGTTTTTAAAGCAGCAGT  
CCCCAACCTTTTGGCACAGGAGTGGCTTTGTGGAAGACAGTTTTTCCATGGACAGTGTGGGGGCTG  
GAAGGTGATTCAGGATGATTCAGGTACATTACATTAATTTGTGCACTTTATTTCTATTATTATTACATTG  
CAATACATTAAGGAAGTAATATTATACAACTTACCATAACATAGAAATCAATGGGAGCCTTGAGCTTCTTTCC  
TGCAACTAGACGGTCCCATCTGGGGGTGATGGGAGACAGTGACAGATTATCAGGCATTAGATTATCATAA  
GGAGTGACAACCTAGATCCCTTGTGTGCACAGTTACAGTAGGATTCGTGCTCCTATGAGAATCTAATG  
CTGCCACTGATCTGACAGGAGGTGGAGCTCAGGCAGTAATGCGAGCAATGGGAGTGGCTGTAATAACAGA  
TGAAGCTTAAGATGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT  
CCCTGCTTTAAAGAATATGTTTGTGGATTATAGAGGGAACAACACACACTGGGGCCTTTCCGAGGGTG  
GAGGGTGGGAGGAGGCAGATGATCAGAAAAATATTAATACTAATGTGTACTAGGCTTAATATCTGGGT  
GTTGAAATAATCTATACAACAACCCCATGACACAAGTTTACCTATGTGAGAAACCTGCACGTGTACTC  
CAGAGCTTAAGATTAATGTTAAAAAATTTCCCTCCAAAAAGGATATATTTGCATCGGAGTTATATTGTAT  
ATGAGTATATATTTGTATATATAAATACTTGTATATGAAAAAATATCTTTTTTCTTTTCAATTTATTT  
TCCAAACATTAAGTCGGGCACATTGGTTAGGAATTCACCAATACCTTTTACAAAACCTGAGGACTTGG  
TGATAAAGGCACTTTTTAAAGATTACACACTGGCATGGGGAATAATACCTTTATAAAGATGATCTATGT  
GTTCTGTAATATCCCATGTCATCTCCTAGCTGGATCTTCCGCTCCACAAAAATTCATAAGATGAGATTCT  
TGAATTAGAATGCATGCCTTAATGTATTAAAGTCTATGTAGAGAGAGTTATTTAGTCCATGTAATTAAGT  
GGGAATATTTTTTATTTGATTACTGTTTTATCTGGATCTTGCCCACTTAAGGCCTTCAAAAATGAAATTTA  
AGGCCTGTAAAGCAGACCAACATCAACAGCATATTCTCTCTCTTGTAAAGTATTGCTAGTTGATAAA  
AAATTTCAAAAACATGTCTTAATCAAAAACAGATGATCCAGCACAGGTTAATAAATGTTTTGTGAATA  
TGGCACATTCGTGTCTCATTACTACAGTTTTTCTATGCTGTCTTTCTCAATAATTTCCCCCAAAATTGTA  
GTGTTTACATTATGGCATTATAGTTACCTCTGAACCTAAAAAATTAACCTCAAAAGTATTTAAAAAAT  
CATTATATTTAAACCAATTTTCAATGTTTAAATGGTTGTACAGGGCAATGAAAGGAAATGTAGTAATAAC  
ACAGAATCAGATTGGTCACTAATATTTTCTGCAGTTGAATATATGTAGACTGGCTTAGGGTCTAAAT  
AGCATTGAATCCTGTTACCTTCCATCTATAATCAATTAATGTATTATGACATTGTTGTCTCAGATCACT  
GGGATCTCATGGTAAGTAAGTAAGGGATTATCTGTGCATTTTCCCAATATCTATATTAGTTTTAATAT  
ACCTTTATGTTAATGTATGACACTGACACTTAGTAATTTGGATTAACTTCTATCAGAATTTGTTTTTCAC  
TCATACTTTGTATACATGTCTTAAGGGTAGGGTAGATGTACATTTTTTTCTGTGTGAGCCTATCTGTTTCT  
TGTGACACTACATGCTTTCTGTCTCCTCAATTTGTGTTTCTTTCCGTGTACAAATATGCATCATCTACCAT  
CTACATCTACAAAACATGATAGGCTTCCAAATGTTTTCATGTAATACATTTTATGAGTCTCAGTAGAGTG  
TTAGATGAGTGGTTAATTAGTAATGTTAATAAATGTAATTAACAATAAAACATTTATAATGTTAATAAA  
TATAAGTTTATTTGAACTTAATAAATTTAAACATCTTCTGAAATGTAGTAGAAATTTATGATAGCCATAAC  
TAGTACAGTATTTTTGCTTGTTTAATTTTTTGGTGATATTCCATTTGTGGAATGAGTGTGTGTGTGTG  
TGTGCAGTACAGACAGAAAGGAGAGAAACATATCTGCATGTTATGTTAGAAAGAGTAGTGTAGCTACCC  
TACCAAAATTTACATACTGGCTGAACACAGTATGTAAAAAATATTTTTTTAGTCCATTGCTGGTGTCTCT  
TGTGTTGGGTGACTCTATTCCCATGTTGATGCAGGAACCAATCTCCTTCTCTGTGGCTGTGTAAT  
CCCTTGCAACCTTGAAGTCTCTGCATCTAATTTAGGATGAGGAAAGTGAAGGTGGAGGATATAGCCCT  
CTTGACTGCTTGAACCTGGACCTGGAACATCTCTTTGCTCCCATTTCCATGGGGAAGAACTAGTGACATG  
GTGGCCCATAGCTGCAGAGGGGAGGCTGAGAAATGCAGCCTCTGGATAAGAAGCCTACTCCAGTGGTTA  
CTGTACATTGTGGGAGGAAGCTTGAATCTGATGGACAGTGAGAACCATTTCTCCACACAATAACGAAAT

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GACGCTCTTCTCAACCTTGGCAATGTAGCATCCTGTGACTTAAGTATGTAAATAATTATCAGTACAGGTCA  
 GTGAAAAATTAGGTCACCTTTCCCTTCCACTTTTAATTCTATAGTTTAAATTGCTATCTGCTACATATT  
 ATATATATGGGAATAGATAAGATTATCTATAAACATGTATAAATTGTTTCTTACACTAAAAAGAAAAAT  
 GACAAAGAAGATTAGTTAGTTGCCCAATCCACACAATACCACCAGGAGAAAGTCTAGGAACCATACC  
 TTCTAAATCCAGGTCTACACTTCTTTAGTGCACATAAATTTTCTTAATATAGCTCTGAGGAGACTGGTG  
 TTTAAGAGGAGAAATGTTAAGCCAAAGCCATTTCACTTGGCTCTGTACAGACAGTAAGTTAATTTCCAG  
 GATGTATAACTCCTGATTTTCTGTGATGACAGAGAAAATACTGACCTGATTTGGGTAACCTCTGAGGTTTG  
 GAGATCTTGAATAGCCTCATGTTCTGAACTTCTTTACCATACATGAATTACTTCTTAGGAAGAAACATT  
 TATTTCTGTAGAAATTTGGTTTCGCATTTTATTTTTATTTTCTTAGACACTGGTAGTTGGAAATTCAGGAAG  
 AATTTGACTACAAAAACATTATTAAAAAGAGTTTCTAATCTCACCTGCTAAGTGCTACAAGGAAAAA  
 AAAAAATACATTTTGGGCCCTCAAGGGGCTCCAAATACGGTTGAAGGAAAATTAGACCCAGAATAGTATAT  
 GATTAGGAACAAAACGATGGCAGAGAAATGAGAGTTAGAGAAAGGAGAGATAATCCTGAGTTACCTTAG  
 GAAGAGAAAAATTCACAGAGAAAACGGCCCCACACTGATTTGGGGAAGATGATTCAGACTTGTCTCAAT  
 GGCATGAGGAGCAGGGCCAGATGGGAAAGGACATCGTGGTGGAATGACACGATGAGCAGAAAGCTTAGA  
 AGTACTTCTGCTTACAGTCTGTGATTTCTGCCTCTCCCTTGTCTTCTGAGTGCTAAGTTGAGTGTAGTTC  
 CCCACACAAACCTGAGCTTTCTTCCCTCCAGGCTGCTCCATCAGTCAGACAGGAGTGCCTTCTCAGGG  
 GATCCTCTTCTCATCTTATCGGGCCACTCATCTCGTCGACAGATTTCCCATACTCCTGGTTGACTTGCT  
 CTTCCCTCTTTTTAACTGACATGAGCAGGCATCACCTCTTCCAGGAACTTCCCTGACACAGGCTGAGT  
 CTCTCTGGTGTCGGGAAGGCTTCTGTATTACTGCATCTGCCATTTTGATTTAAGGTTTCTGCTCATTC  
 CAACTCAACAGTGAGCTCTTTGAGGCGAGAAATTGTGCTTATTCAATTTTCTTGTATGCCCTAAAAAT  
 GTATTGTGATAATATATAAGTAACGTACAAATTTACCATTTTCACTCTTGAAGTGATAGCTCAGTGGCG  
 TTAAGTGCAATTCACACTGTTGTGCAACCATTTACCATTCATCTCCAGAACTTCTCATCATCCAGGC  
 AAACCTCTGATATCCATTACACAATAGTCTCCATTTCTCTCTGCCCCTCAGCCTCAGGAAACCTCCCATCTA  
 CTTTCTCTTTTACGCGTTTAACTACTCATATAGATGGAATCATCCAACATTTTCTCTTGTGCTTGGC  
 TTATTTCACTTGACATAATGTTTTCAGGTTCTTTTATGTTTCTTATGCGTTTTTATATCTCTCTATCT  
 TTGATAGCACCAATACATAGAAGACAATGAATGTTTTGTGAGTGAAGACATAAGACCAGAAAGAAAAA  
 GGATGTCTATATTCTAGGGACACTCAAGACACTTTCTTGGAGCAGAGGCCTGTAGCTTGGAAATTTGGAA  
 GATGAGGTTGGCAAGGTGGTGGGAAAGGATGGAAGATGATACGTTTCTTGAAGCATGTGGATTTGCT  
 TCCATAAGCAGTGGTGGACAGTGGGCACCTTATCTATTAAGAAGATGATTTTTTTGTGACTCGTGTA  
 GAGCACTGTCTTAGTTACCTACCCAGTGGTAGATAAGAGAAGCGGATTAAGAAGAGATCTGAACCTGAG  
 GAAATGGAGACTCAAGGTTTTCAGGATGCTGTTTATAACATATATTTATCTAGTACTTGGCATGCC  
 TGTGCCAAAGCATGCTTTTTGGTTTAGTTAAGCCTACTTAGCTCGCTAATTTCACTAATTTTGGCTTGAA  
 TTGCAAAAGATTGATGGGGGAGATGGGGGAGTCTCTGACATCCTTCCCCCACTCAGAGTTTGAAAAATA  
 AAATTATGAAGAGCAAAAGGATCTTTTTCTGTGTTAAATTGACTTCATGACAATAAACGAGTTGTGGTT  
 TTAGTGGTTAATTTATAAAATTTAGGCACTCTGGTTCTTCTGTAATCTAAAGATTTTTATATATATGTAATA  
 TACAAGTTGTCTGGCAACTGCCAATCTATAAAGGAGAAAACATCTTGAACCTGTGGAGATAATAAA  
 ACCATATTCAGCTGCCAAAGTGTCTGTGACATACTGTCCAATGAGACACCAACGCCCTTGCATTACAGC  
 CAGCAAGGTGTGGAGCTAGATGTTATGATCTATTTAATAATATTAGCTTCTTCTCTGGGTGGGACTTG  
 GCCCAGCAAGTACGACAGGACCTATCTATCTCTCTCAAAAGTCAAGCTTTCTTACCAAAATGTACA  
 ACTCAAGCCACAAGAAAAACAAGTCAAGGAAAGGACCAGAGGAGCAGAGGCACATGCCCTTGTTCAG  
 ACCCTGGGACCACTCCAGCTCTGGCTTCTTGCAGATCCCGCTCTTCTCAAGTTCTCTGGCTTTGATCCT  
 AGTTTTCTGCCCCTACTATTCTGACATGTACAGCACTTAGCAATTCATAACTTGCTTTATTAACCAATAT  
 CTCAACAGAACTTTTAAACAACCTGGGAGGAAAGCAGAGTGGGTGTTACTGTCCTCATGTCACAGATAATG  
 AAACCTGAGGTTTCAAGAGGTTGAGTGTCTTGGCCAAAGGCCACACGGCTTCTTAGTGGAGAAGCCAGGATC  
 TGCACCAATGTCTTCCATTGGACACACTGCCACTTAATATGTTACTAGTTTTTCTTTCTAGATGAAGCA  
 GTATGAGGAATCTACCATGGATATCTCTCTCTATTTTTTAAACTGCAAAATAATGATAATGATAATAA  
 TGAATACTTCTAGAATACAGTCTCTATGCCAGGCATATATGCTTTATATGTACTAACTTGCTTAAATCT  
 CCTAACAACCTTAGAAGGTAGTTACTAATATTATCACTATTTTTTAAATGGGGAACCTGAGTTACAGAGAT  
 GGTAAATAAGTTGCCAAAGGTACAGAGGCGAGCCAGATTAGTGACAAAAGTTGAGAGTACTCAGTTTGA  
 ATTTTACATGTTCCGTGGATATGGTTTATGCCAAATACCTTCTCTTTCTAGACCTCAGTTTCTCATGT  
 ATCAACAGAGTGGAGTGCATATCAACTCTGAGGTCCTTCTAGCCTGAAGATTAGAGTCTTTTATGCC  
 CACATGATATGGAAGACATTAATGCTGGCTCTTTAAGACTGGAACCTTGTCAATTTAAAAAATAAGCTCT  
 ACTAAATTTGCAGTAACTGTCCAAATACGATCTCTGGTCTCTGATTTGTATCTCTCACAGAGCATGATA  
 CAATGCTAGACACATATATACTCATTAAAACTTGTGTAATTAATGTAAGAACATTCTCCAGATAGAC  
 CGTAAGGGTGAGCTGTGAACTGATGCCCTAATATGCTCTCAGCTGCTGACTTAGGACCCGTTGGGTGACAAACCTG  
 TCCTTGTGTTCCATCTGTGACAGTGGGCGAGTGTCCAAATGAGTCTCTTCATCAAAAGTGAAGTCCAGGA  
 AACTGGATCAGAGTAAGTAAGGAGTCTTCCTTGTCTTTTTCTCTAAAATACAATACAGTGCATTCTAG  
 CAAACTACCAGCATGCCTATAAATCTCATTTTAAAAATATCAGGAAATAGATGCTCATTGATAAAGAGGG  
 TAAAGATGAGCAAGGGAGAGAGTCAAGCCTGTACATTTGTGCTTAGGGTATTTTCATTTGAGAAATTATC  
 ATTGGAAAGATCAATTTCCAAGGCAGGCGTTTTGTCTTGACTTAATAAACTAATCTTTATCAATAATAAT  
 TAAATAATGTCAATTTCCAGATACAAAGGGGAAACCATAATGCCTTTCTATATGCCTTCTCATATCTTCA  
 GTGTTTCTCAAAACCCAGCTGTGGGGTCTTTTTAGGGAAGATACAAGAGGGTGAGACCATGTGGAGCACA  
 CACTCAAGCAGCTGTGAACTGACATGAGGTCCTTGTACCTTGTGAAGCTGACAACTGTCATGAAAAGCA  
 GCCCTAGGAACATGGGTAGTGGCCCGGGATCCAAACTCCTGAATCCATAAAAGGGCTTTTGACTTCTT  
 GTTCCAGGACAAGTGACATCTGACATGCTTGGCTGCTTGTGCTTCTTCTCTCTCTCTATCCGTCTTT  
 CCATCCATCTGTCCATCAGTCTATCTGTCCATCCAGTCATCCATCCATCCTTCCATCCATTCGTCTATT  
 ATCATCCGTCCTTCCATCCATCCATCCAAAGATTATTGAGCACTTACATGACAGGAAGTATGAGACACA  
 AAAGAAAATTTACACAATTCTCTAGGGACATGAACATAGGTTAGCAAAAATATATGGGAAGTCTCTGC  
 TTCAAGTAAATTTAGCTTAAAGATATACATCAGATATTTGAAAAGATATTTTGAAGTTCAACATTGAA  
 ATTCTAACTACATTGTGTCCTTAATTTCTATTTTCTAGTTAGACTTTTTTGAAGATACAAATCATTTGAA  
 TTATCATTATTATTGTTACTTGATTTTATTATCCCATGAATGGTAAGAATTTTAAAGGAAGGTGGGT

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GCCCTAAAAATACATTTATGCCAACTGGATTGAATCACCTTGAATCACAATGAGTACAACAACCTGCTAAT  
 GAGCTAACACTTAATGAGTAATGACCAGGCACCAGACACTGTTCTAGCACTTTTATACTTACTGATTTCTT  
 TACTCTTCATGATAACCCCTATGAGGAAAGTGCTTTTTTGTAAAGCTCCATTTTCAGCTGAAGAAGCTGAG  
 GCCTGGAGAAGTTACATAGCTTTCTCATGGTGTCTCCACTATGAAGTAGCTGAGCTGAGATCTCACCCCAA  
 GGCCCTGTCTGGTTACAGCCACACTCTTAAGTACTCACAGCTGCATCACACTGAATATCATCTCCCTGCA  
 CTGCCATTTTCATTGAGCAGGGCTTTGCCGTGTCAAGAACATTCATATCTTTTGATAAACAGTGCAATTTT  
 TCCCTGATAGTCTGTATGGGACAGCCTCCTTGTGTCATCTGAAGGACAGGGACTTCAGGACCTCCTGCT  
 GTGGTCACCAAGGAATCACATTCAACTTCTCAGCAAGGTGTTATGGTCCCTTCTCAGTTTGCCTACGATC  
 CATTGAGGCAAGGTTTCTTCTCTCAATACACCTCTGCTTTAGCCAGGGGGACCTCCCACGTCTCTCT  
 CTATGTGTTCTATTTGTCTCTGACTGTTAGTACCCGCTTGTGTGGTTCATGATCCTTCTTCTGCCTGG  
 AATGAGGCTCCTCTTCTGAGTCTGAGAGCTTCATTCTGTCTGTCTTTTGGGCTGTGCCAAAGCCCCCTG  
 CCTTCGTGGACTCCCACCTGATTACCAATTTTCTCTCTCTGCGCTCTTCTTAGATTGCAAAATGG  
 TGCCTCTGGATTGGGTACCAAGACTTGCAGTGCCTTATTTTGATACCCTAATATGAGACCATGTTATAT  
 GCCTCTTGAGATATCATTCCTTTCTAGCAATAGACAGTGATAAGCATGCGTATAGAGGGTAAACGTAGG  
 ACTTTGAGGTTTCATCATCTCAATAGACAAAAGTAAAGTATGCTAATTTCAATCCTTCACACAGTAAAT  
 TGAATGAATAGGTCTTCAGTAACTATTTGAGGAATGAAATTGTTATTTGATATATTGATTTAACTGAGCA  
 AATCCATAAGTGCCACGCTTGGAGTAAAGTACAGGGAATCTCATTTTTGGGTAAATTTCAAACAAGTAGG  
 AGACCATCCACTATCTATTAAGGACAAAGGAGATTGAGTGACAAACATGTTCCAGACCATCCAATGGTG  
 TTATTTGAGGTTTCATCCAGCTAGTAAATGGGGCAATAAGAACCAAAAAGCAGGTACTGTCCCTATG  
 TAAGTAGACTTCTAGTCTGGCCAAAACAAAACAAAAAACAAGCAACACAAAACAAAACAAT  
 GTGTGAAGAGCATCTTACCGTTTCATTGCTTTGGATGATTGTGTGCAAAATCTAGTTAATGGGGGTGGATCTG  
 ATCAGTCTTTGTAGGAAGTCAGTATTGGCATAATGCTGCGCTTCTGAATTTCTAAAAATATAATTTATTA  
 TTTTAAATGAGTTCATGCTCAATCAACACTGAAATTTACTAATCACTACTAAATAAGTAAAGATCCTATAGTAG  
 ATCCTTCAAGAAATGGAATTTGAGACATTAGGTCACTATAAACCCCAACCCCTTGAATCTTTTGTGGCA  
 ACCTTAGGAACTTGAATGCTTTTACACTCTGATAAAGGTTTAATTTGAATCATAGCCCCAGTGTTGC  
 AAAATGAGTCAGAAGATACAAAGTATCTCATAGGATAATATTATAGCTGTAGGTACTTCAAATGGACAAG  
 TATAAGAAAGCAGTAATGGAAGATGGAAATCTTTAAAGATGCTACCATCCTGAAAAGATTGCAAGCAAA  
 AAGCTATGATTGCTGGAGACAGATAGATCCAAGAACCTAGGTAATTTTTCAGCAAACTGTGGTCCACTT  
 TCGCCTCTTTCTTGACATTGACTGTGTTTTAACAGGGAAAAAGTTATCTGAAATTTTGTATAGAGTTCA  
 AACTTTAAATCGTGTTCACTTTGCTAAAACCTCCACTGGATGGAGTGGCAGAAGAGAAAAACACAGAAAT  
 AAAAGAAAAGCAGTAATGGAAGATGGAAATCTTTAAAGATGCTACCATCCTGAAAAGATTGCAAGCAAA  
 GCCCAGGAAAGCCACGGGGAGGGAAGAGCGCTTAGAGGTGTCCCAAGCTTTCAGAAGTGATGAGGGA  
 AACCCACAGCTCTCTTGTACTTCTTGGCATTGTTCTCTCTATACGTTAGCTTTTGGTTAATCTTTTCAT  
 GTTACTTATTAATCTCTGTTTTAAAAATTTACATTAACCTCATTGGTTTCATATCCCACTTAACAAATTAGA  
 TATTTCTCTTGGGCTTATTAAGAAAATTTATTTGCTCTCATATGTTATGGCTTTAGATTCTCTGTAGCT  
 AGGACTGTTCTTAAATTTTATCTTTACCTTTGTTATTTCTCTGAAGCATCCCCATTGGGGTGGCAGTGG  
 GGGGTATTAATGGTTATGTAATAATTTACATGTAATTTGCAATTTACACATAGCCTCAAATATAATGAG  
 CCTAGTCTAGCTGCCCATACCAAGAGGATATTATAGTTGCCAATAAAATCAGTATTATTTCTTTTTTT  
 TTCTGTCTTTTTTTAGCTTCTTGCAAACTTCACCTCAGAATCCTTTTTGAATATCAGTTTGTGAAAAGC  
 ACCGTGCTGGGTCTTTTGGGAAAAGCAAGATGAGGGCAAAATGCATCCTCCTCTAGTGAGTCTAGCAC  
 ACAGATGACTCAGGAAGTCATGCACCTGGAGGAGGAGTATCTTCTAGAATCGGGGAAAGGTTAAGGAAGGG  
 ATCAGAAACCTTTTCACTCAACCAATTACATTTTCTGAAAGCATGTTATTAATCGTACATGATCTTGC  
 AGACCCAGATAGTAAATACATATATCAATGTTTTCTTGAACAACTGGAGTTAATTTCTCATATG  
 TTGGTTACCCTTCAAGTATTTATGTTTAGGATCTGTTTTCTTCTCTTAACCTTACATTCCAAAGTTTAGG  
 TATCCTTCCCCCTCATTTGCTGTCCAAAACAGCATCCTTTCATGTAGCTACATGCCATGGAATGATTG  
 GTTTTGGCCATGGATTCTAGTCTCTAAATTTGGACTTTTATTTGGTATCTAAGATGTCATGGACAGAACCC  
 ACAGATGTTGTACAAAAGGGCTGAGTGGACAGTCCAAACAGAGTTACATCATCTGTTCCAAACACCTTG  
 TAATGGTTGTATCAGCGTCAATGTCTGAGTTGCTGTCTGGTCTCCTGGCCAGTCTCAGCTGGCCATG  
 CCTGTTACAGGCACCAGAGAAAGCTTCATACCTCAGGCAAAATCTTTACAAGGGATTGAAAGGCAAGAAAC  
 ATGTATTTTGGAGGTTTACCTGTTTATTTTCATGTATAGCTTCATATTAACAGATTTTGTATCACTTAA  
 AAGTAAATAAATGATTTTGTATTTCTCAAAATCATCTTATAATTTTAAATCTATTTTAAAGCTTGCAAT  
 TACATTTAATCTTCAATCTTGATGCATTTTCACAGAGTTTCTTTAGTTAGTTAAGGATATTAATGACTT  
 CCTTTAATAGTTGATGAAGTGAGTCATCATCGACAGTGAGTCACTAAGGCCAACTCTTGTACCTGCTCTT  
 AAATAGCAGTTGTTTTACTAGATTTGTACTGAAACCTTTTTAAAAATCTGTTTGTCTTATATATAACAG  
 CATTTCCAGTATGTTAATAACTTTCTTAGCTCTTCAATCATTTTATGAGAGCATTACAAGAAAAGCAGG  
 AGATGGGGAAAGAGATATCTTGTGTCATGATGAGGATGCAATTTCTACTTAGTCTGTTGTGTTTTG  
 GATTTCGAGAGAAAATATGTAATGAATCAAAATGTTTCTACAGTCTCTGAAAAGATGTAATGAGACAGT  
 CTTCACAGCAGCTTTGATCATCTGGGAAGTCATTGACTTTGATCCTTATCCTATCAGGGGCTCTTACCCT  
 GGGGTCCATAAAATACCCAGGCATTTTAAAGAGTGATTTCAAGTATAACTGTTTCATTTTGTGATTTTT  
 AAAAATATTTTGTTTTATGCACTTAAACCTTAATCTGAGAAGTCATCTGTAGACTATACCAGATTTCCA  
 AATGGAATAAAATATTTAAGAACTCTCTTATGTGTGTGTTCAACCTATAAATTTTATATGTGTAGCTC  
 ATGGTTAGGTGGTAAGTAGAGAATTTGCTATCTGTGTAATATTTGGTACTTTTTATAATGAAAAGGAAG  
 TAATACATGATAGGTACCATTTATTTGTTGACCACCATATTTTCCAGGGAATGTGATAGATACTTTT  
 ATATATCTTTCTAGTTTTTACCATAACATGCTGCAGGGATAGTGTACCATTCTCATTTTGCAGATGAA  
 GAAATTTGAAACCAGAACAAATTCGTTTCATTATTCAAAAATATCCATAGAGCATACACTAAGAGAAGGC  
 ACTCTGTAGGCACCAGAAATGAATAATTTGACCCCAAACTCACCTAATCATAAGTGGCAAGCTGGACC  
 TAACAAAGCCCATTTCCCTTCTATCACACATTCCTCCTCATATATCATATTCTACATAGAAAACTT  
 AACAGTCTGTTGAGACACTTGAACCTCTAAGAAGGTAGTCAACAGATACTTTTCTCTTTATATAAATAT  
 GATATCTAATTAGCTTTTCTGGAAGGAGTATTCTGCCCTTTTTTAATTTCTAGCATTCCTCTGAGCAAA  
 TTAGAGCCAGGTAATGATTTCTGAGATAAGTCAATTTCTTCTAGGACAATCTCTAGTCTTGTCTATCA  
 TGAGATGGAATAACAACGGTCTATGTCTATTTCAGTGACGGCACCTGCATGTCCTTGTATCTAAGAAAAGA

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CACCTCCTTCTCTGCTTGGCTAAATATTTGTAACCTTTGCTTTAATTGGTATATGTGCCACTGTTTGTGA  
TGTGGGAGGGGTTTTATGGTTTGTGTTTTGTTTGGTCTTTTTTAGTAACCCCAATCCAACTATTCTCA  
TTTGTAACTAAATACTTAGAACAAGAGGCTTTGCAATCTTGAAGACCGAATACATTTTTACTACTAAA  
TGTAAGGCAGATTTGAGCCACCCATTTTGTAGTGCTTGATTATGGCAACCCGAGGAACTAATACGGTTA  
CTCTTTATCTTTATAGGAAATACTGCTGTAGTTCCCTGTTGTAATCCTTAGGGAGCCAACATTGTTGATG  
AGACCTAGTAGCAAGCCAGAGGCAATGTTGAACCTAGCAAGATATGGGATAGTTTACTTTCAAAGTAAT  
TAGCATCTAGAGCTAGAGAGTTTCTCTTACAGGGTGGCTGGTGTCTTAGTCTATTTTCTGTTCTATA  
ATAGAATACCTGAGACTGGGTAATGTACAAATTATAAAGATTTGTTGACTCACATCCTAGAGGCTGGG  
AGGTTCAAGATCAGACAGCCACATCTGGCCATCCTTTAATGAGGGCCTCATGCTGTGCATAACACAGCA  
GAGAATTGGAAGGAGAAATGGGCACATGCAAAGAGAAAGAAAGGGGACGAAAGGGGCTAACTACTTTGT  
AACTATGAGACTAATCCATTCCCTGGAGAACTAATTTATCTCATGAGAAAGACATGAATACATCTTAAC  
ATCCTAATCACTTCTTAAAGGCCTCAACTCTGTACACTGCTACATTGTAACAGGCAATTAAATTTAGCA  
TGAGTTTGGTGGGGACAACTACATCCCAACTGTAGTACCTAGTACCCACTTTATTTTAGAGTGGCT  
ATTTAATGACCTGGCAAGATCTACTGTGCTTGTAAAAGAAATCCACCATGGGTTAAAGAAAAATAGTTTCT  
GGCTTCCAGTCTCTTTTGGCCTCTCTCTAGAATGGCATATACAAAGTTCAGTGGTTACTGACTTCAAAGG  
TGGGGTGAAGACACTGAAATGAATTTTTCTCTTTCTTTGGTGGTGTCTCTCTCTTTGTTGCTGAA  
ATTTGTGTAGATAATGGAATGAATATGGGAGATAGGGAACATAGAAAGACTGGAGGGAAGGGAGAGT  
CTTTTCTGAATTAACCCCCCATGTGCTTGTGAGACCCTTGGACCCAAAGGGCTCCTGACTGGCTGGGCC  
CACTTCTCTGTATATGAGGCCATAGGGCTTTTCTGCTTCCAGTTGAAGCATTGTATGCTTTG  
ATGCTCAGCATTCTGGCAATTTTACCTTGTAAAACCTCCCGTTTGCACATTCTGAACCTAAGTAGAAAA  
GGGAATATAAGCCTCTTGTTTTTGCTCTTAATCCATTCCAGAACTATAAGTCCCTGGGTTCTTGGCAAC  
AACAGGTGTTCTCTAGATTTTAAATCAAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGGAAT  
ATCTCACTAAACGACAGTGGAAT  
AGGAAGCTATCCTTGTCCATGCGGTTTGGAGACTTGTCTTAAAAAGAGACCGTCTACTTCCCTCGTAGT  
TTTTGTTTTGAAAGACATTTGTAGTGTTTACCAGGAGCATACAGTTATCTGGAAATGCAGACTGATGACA  
ATAGTATTTGAAATGCTCGTAGATCTGCTTCTAGGTGTGATGGAAGAAATGATGTTCCAAGGTACAAGT  
CTTGTGCTTTGCTGTAACAAAAATAAGAGCTGTGCTCTTTGTGAGTAACTCGGAATCACTCCACAGTAGCT  
GTCCTTCTGTCCATTTGACAAGCACTTAAAGGGCAGTCTTAAGTACTTTACTTCTATAGTTTATTAAT  
TTTTCCCTTCTTTAGTTTGAATCTACTCTCAGAACTGAAAAATAATTTCTTTTACCTTTTTCCCTTT  
CTCATTTAAGCTGAAATGATTTCTTTCTGAGCGTGAAGGAAAAATAAAAAAGAGCTGTGGTTAATA  
CAATTGCTTTGCTGTAACAAAAATAAGAGCTAGTTTACCTTCAAGCTGTGCTGTATCAGAGTAAGGATC  
TGTTCTGTCACTCCAGGAGATTTTGATAAGAGAGAGTACAAAATTTTATAATATCTACATAGCATAAT  
GTAGCAAAATATAAGAGTATTATAATGTTTATTGTTGGGATGAGGGTGGGGATGGGTTTTTTTGTGTGTG  
TTTGGAAATTTGGGAAGCTAGAAGATACTTAAATCCATCAGCTTCTTCAAGAACTCTTCTCAAAATGCTT  
ATTGTCTAGACAACCATCTCTTCTATAAAACCAAGGCTCTGAGTGTAAATACAGATGGGGCTGGTAAACAGGT  
AGGATTGCCATCTGCTTTGTTTTCTCTAAGGGACATTATTTTTTTGTGATCCCCAAGTCTCATCTCCTCAA  
TCTGAAAGTCTTGACTATTTTCTTTCTGAGTCAAGATAGAGCTGTGAGATTAATCTTTTCTCTCTGAC  
AACTACTTCTCTCACTGTCTCAAAACACTTACTTGTAAATGGAGGAAAAAAGGGTAATTATGTGTG  
TGTGTGCTTTGCTGT  
TGCAAGTCTCTATGAGGTACCTAGTAATTAATAATACAGTCAAGTGTGAGATCCAGAAACAAGTAGG  
AGTGAGGCAATCATTTTCCCATGAACAAGTAAATATTTACTGCTTTTGAACATTTTAAACCTGTGCT  
TCCTGATGGTGGGGTGCATGAAGTTTGTAAAGTAGTGTATCTCTTATTAGGTAAACAAATAGGAGC  
ATAATTTTACGAGGAAACAACTTTTCTTTGTTTACCAAAATTTGTTGAGAAATTTGCCAAAGAAATGAAT  
GCTTACAGGAGGATACAGCTTAATATCTTACATCTCCCTTTGTCAAAGATACAAATGACATTTTCTCA  
TATCAACTTCTCTACAAAAGTGAGGCCATACATTTTAAAAAGAAATATACCCAGTATTTTAAAGTTTGT  
ATATATCGTGATCAGAAATTAAGATATATCCAGCTTTTGAAGAAATATACATATTTAGCCATTTAAAGGTA  
TGTGGTAAACTAACTGTATGATAAAGGTTATGGGAAATATTTCATAAAATTTATATTAAAGTAAAGAA  
CAATTTCTCTCTTTGTATTATAGTTATTTTACATAAGCTACAATCTATAATTTCTAAACCTTAATTTCTTG  
AAGGGCTTTATAGCCTCATTTTCTTTCTTAAATAGAGAAAGTTTATACACTGCTTTTATGTCTCTATATGT  
TGATGTGTAAAAATAATCAAATACTAGTGGGTGAGTAGAATGTAACATAATATGGTACACACACAGACA  
CACAGGATGACATAAACTGTGCACATGAGCTGATGTCCAGAGCAGGGAAGCTGCTAAAGAAATGTTTGA  
GTAGAGTCAGAAATGCAGTTTGTGGTTAAGACCAATAATTTTCAAAGGAGCATTATAAGGAGTGTGGTT  
ACTTGGGTGGAGTTGAAAACCAAGCAACAGTTGGGCAGACTTGAACACAGTTTGTCTTTAGGTTTCTT  
TTCTTAATGATTGGTCTACAATGAGTTAGCCACTCATCGTATTTAAGGCTTGGTAAAGGAGAGACTTCT  
TTTGCCATGTAGTTTATACCTCATGTATGCATTACAGTAGAGAGCTCCAGGAAATACTGCAGGCCCTTCTA  
CTGGTTTTTATCTCTATTTTAGATAAAATGAGGAAGAAGTAGAATTATCATAAAACAATCCTGTTGGCTT  
TTAGTTGAGATATACAGAAACATCACCTTTGAATCTGTATATGTAAAAAATAATCTCAGAGTAA  
GATATAAGTCTGTGTCATTGTTCTGAAGGAATGGGTAATGTGCAAAATGTCTTACATTACATATAA  
GTAATACACAGTCTGTATCAGATTGCATAGTCAAAGTTGGCAAGTTTGCATATTTTACATAGATATCAT  
GACCTTCATCATTACACTTCTTTCAAGAAATGGTCATCTTAATATGGGGTATTTATTTGAGGCATACAC  
CATTTATTTTAAAGAGCAGTACCTTTGTTTATTGTAAACCTTCTGGACTAAATCTTCAATTTTCTCA  
AATGAATTCAGTTTTTGTGTTTTTCTTACCCTGGTTTTTACTGATAGCGTTTGCCTGAAGAACACC  
ACTTTGTTTTCCCAAGGCAAGTAGTCTACACAGGCGAGTTTGTCTGTCTATCCCAAGGCAAAATAGACA  
GCAGCAAAACATAGTGTGGAGGGCTGCTGGGTTCAGTAGAAAACCATCAACTATTTCTAATTTGGGGGTGTA  
TGAAAGACAGCTGCATTTGACATGTATAACATCTTGAATGCTTGGAGTGTAAATAAACCCCAACCTG  
CTTTCTTTTCTCATTTCTTGCACATGTATTTAGGCAAAATATAATCCACATGCTGTTGTTCCCTCTCC  
TTTTAATCATGAAGAAATGTTGTTTTATAGGGCTATTTGAGGTCCAGGATGCCTTTTATCCTTTTTAT  
TAGGTTATTTTTATATATAAATGAAAAGAAAACATAAACAGAAAATACAACATGACATCATGAATGAGG  
GCAAGCACAACTGCCCAATTAAGTTTGAAGTTATAAACCTAAATATTTTAAACAAAACATTTCTCT  
TGGTGTGTTTGAAGAAATGCTTTCTTCTATTGGGCAGAAATGCAGCCTGTTGGGATGAAGGAGAGAA  
TAGAACAATAATTTATGAGTAGTACCATGGCTTCTGGGACATCTGCTAACCCCTTAATTTTTACAGT

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AACCCCTAAGTGGTAGGCCAGTCCATCTGCATTTTACAGACAGGAAATGCTTTCAGAGATATTAATTAGAT  
GGCTGTAGACCACAGAAGAATTGAAAGTCAGGTCTTCTTGACTTTTCAGCTCATGACTTCATTACTTCTG  
CCCTCCTCATTTCTGTTGGGAGATGGGTGGGAGTGTGCCCTCCAGATAATCAGAAAGTCCCATTGTTGGGAT  
GTGATTTGGAAATAGCTAGTCTCAGGCCTGTGGACGAAGGCTATTGTAGCCTCAAGAAAGAAAGAGTCA  
GCTTGATATTGGCAAGGTGGTTATTAGTGTGGCAGCTGCATAAGAGCATTGGATAGGTGGTATGATATG  
GGATGGGGGTGAGGTTGAGAGCTGCTCACACCTCCTTATTATGGCAGGGCAAAACCAGAATAGTCACAGT  
GATGGTGTAGTGGGTAGGTTCAGAGAGAAAGCTCATGTTCTTCTAGCATTGAGACTCACAAATATTTCAA  
ACAAGTGATTATTTATCCATTACTATTTATTTTGGTGATGGATGTTGCATTTATTTTATTTTCTAACAG  
TAGTACATATTTGGTAAGAGTTGTTTGTGACATTCCTTATTTAAATGGATTAAACCCATTTTCTTAATTT  
TTTTAAGTGTGTCTGTTATCGAAGATATCTTAAAGTGTACAGAATGGGAATCATAGCTTTAATGAG  
TCTGCATATAAGAGAGTCCAAACATTTTCTTGGAGAGAGGAGGTCATTTCAACTGTACTATAGGA  
ACGATAGGGCCCATGATCCATGGTATGGCAATAAGTTACTATTTTGGAGAATAAATCGCAAAATATGG  
GACGTGAAGACTGCTTGGTATTACACAGGAGTCTAGTCTTCTGATACATATATTTCTATAAGCTTTCT  
CCCAGAAATCCAAAGTTTATTTAGCTTGTAGCCATCATTGTGCCACAATCTTCCCTCCATGATTATTT  
TTTTCCCATACTGTACTCTTGCAGTCTTGGCATTGAAAGGGAAGAGATGAATTTTCAACTCTT  
CTTCTATTGAGTGAAAAGCCAAATACAGAAAAAAATGCAACAGGCAATTCATGACTGACATTTTGGAG  
AACATTTGGGGTCATCATATGACTGAGAAAATGATTATCTCTTTTGAAGGTCAGGAAACCAATATTTTTT  
TTCCAGTGAATCTACTGAGGGAACCAACCCTAGCTTTTGTAAATAGCACTCCTCAGGGAATGTTGC  
TTTTTTCTTTTGGAGTCTTCTGCTTTGAACTCTTCATAGACTGTATCCCATGGAAGCAGGAATATAATTA  
CTGTAGTGCTTACTTTTTTCTATGCTCTACTGAAGAGCCACCCTGATTTATCTTTTACTCCAAGGTAGT  
GTGGAACCTTACAAGGATTTAGATTATATTAGTCATTTTGGTGGAGATCTCTGCACACTTTTCAACATC  
ATTTCTAAGAGCCTTGCCCACTCAGTAAAGAGGGTGAGGCTTCAAGAACTCTGTGTACCAACGCAAA  
TTAGGCAATTTGTAAAGAGTCCCTAGTAGAGCAGAGTGAGGAGGAGGCTCAGGATCTCGTGAGGCTGGG  
GCAGGGAGGTGGACATGCTATGAGCTCCTTTCACAGTCAACACAAAGTTAACACATCTTGGAGGAAAAAC  
CGTTACTGTATATGGAAGGCAGAAGGCAGGGATGTCTGTCTTGGTGATGAAGCTATAAGTAGTGAGCT  
GATTTATGATGGAGGGGTGAATTTGTCCATGAAAGAGACTCCCCTCAATTTTATAGCCAGATTACTGCC  
CATATGCGGGGTGAGGAGTGAACATTTTAAAGCATTCTCTCTGTTTCAATATATCATCTCTGGATTCA  
CTATTACTGGGACTTGTGAATATAGACTAGGGATTAAACCTGAGTTTGTCTTTAAAAAACTTTATTTTA  
TTAAATGAGATTCTGAGCAACTGATTTCACTTAGCTTATCAAACATATTCTTACTACTTTTTCGATATG  
CATTTCTGTCCCTCTGTGTGAAGGCCACAGGCCCATGCCCCCATGTTCATTGAGATGGAGGTCTCAAGT  
GATGGCGGGATGAATCAACCTCTCACTTGCCACCTGCGAGAATGTCTACTGATACCTCTCCTTATGTC  
CCGTAGCAGCTGCTAAGCTCCACGTTATTATTGGTGACACTTCTAGTGTTTCAAGAGAGAACAGGATTT  
ACTTTTTGAATGCTCTAAATATTATAGCAGGTTTCAATTTGGAATGTCATATCAGAACATTCTTCTCTGT  
TATCAGGAAAAATAACCAAGGCTTGAACCTTGATGTCTATCCATAGTTGGCCCAATATAATTTTGCATG  
TGCTTTTATCATATTATTTTCTCCTATGAACTGAAGGCATCTCATGGATATTTATTTCCACGCTG  
AAAAGGTAGTTAGATGCTGTGTGTAAGTCGAGACCAGTATATTGGAAGAAAAGAGACTCCATCTAA  
TAATCTTTTCATAGCTCTTACATTCAATTGAGAAAGGTTACTTGATAACCTTTTCTGACACTCTCTCCCAAC  
CCTGACCCAGGAATTCGAGAGCACACTGTGCAACAGATCTAATAACCTTTGTCTGCAGGCAATATGCAC  
AGCTGGGAAAGTGAATTAATAAGACTCTTTTGAAGGCTTACAACATTTCAACGGAAGGATCGAGCAAT  
CCGGCTGGCCTCCGACTGAAAACCTATTACCAACAGACATACTTCAGACAGATTCCATGATCACCATCCTT  
ATGTGGCACAAGTGCTTATGGGGAGCTTCTTTGGCTTCCAAAAGGCCACTAAAACCTGTGACACCTAAATA  
ATACTGGAACGTGTAAGTGGGAATTAATAATTTCCATTTAACATGTAACGTTTCTCATCAGAAAGG  
GGCTTTTGGTTTATGATTTGATCGGTTACATGGTCACTGCAATTTGTAACCTCATGAGACACACCCAGAT  
ATCATCTGCGTGATTTCTTTTGGAGTTTATTAGGGTGTTAGATAATCCGAGGTAGGTTTCATCATGGG  
TGGCAATATTACATATAGCAAAATGTATGAGAAGAGAGACAAAGCCTCCCTTTTGAATGTTAACATTTAT  
GCAATAAGTTTAATGTACCGTGAAGTTTACATTACTATTATGAGACTTAACCTAAAAAATTTGGGGTGAA  
ATCTTAAAGAAATTATGAATTAAGAAATGAACCCAGAGGGCTTTCGTTTAAAGTACTGATCACTTAAACC  
AAAACAGTTTGGCTTATCCTATGAGATCGTGGGTATTGAGAAAGAGGAACATTTGCTGCTGCATCCGGA  
GATGTTTCCCTGAGAGCAAGACTAGTTCTTTTGACCCAGTACATCTACAGGTAATCACTGCATGCTG  
TAGAGATACCTGTTCCCTCCCTTCCCCCACCCTGGGGATCTGAAACCAAAATCATTTGCTTTTTCATCTT  
TTACTTATGCTTATAAACAAGCCACCCACTTTCTCATTTTTCCTGATGCCAAGTCTTCTTTACATGAG  
TGGAAATCCACTCTTTTCAATGGAAGACACCTGCTCTGAGACAGGCTACACTGTCTATGAGCCTTGGCATG  
GCTGAGTGATGATGGAAGGTGCAATAAATTAAACTTTAAAAATGCAAAATTTGATGGAATCATGCAT  
CTTGTGCTACAGTGATATATGGTCTAGCAGGATTACAGATACATGCATGATTAAATTTGAATACAGTA  
TAGCAAAATGATCTGTTTAAAAAACACATGAAAAGATGTGCAACCTTATTAGTCATTAGGAAAAATGCACAT  
AAAACACCGTTCTCTGTGTGATACCTCTGTACGTCTATTAGAATGTATAAAATTTAAAAAGACTGAACAT  
AGCAAGCACTGGTGAGGTGTAGACCAACTGGTGCTTTCATGTTTGTGCTGGTGAGAAATGTAACATTACA  
ACTACTTTGAAAACAGTTTGACAGTTTCTTAAAAAGCTAAAAATCCACCTGGCATGCTATATACAGATA  
TCTTACTCTTACGTATTATTAACCAAGAGAAATAAAGCATATATCCATTCAAAAACCTGTAAATAAATTGC  
TCCTAGCAGCTTTTATTGTAATAGCCAAAACTAGAAAACAACCCAAATGTCCAATGAAAGGATACATCGT  
ATTTATTTATAGGACATATCCATGCAATGGAATACCCTTAGGAATGAGAAAGAAATCAACTGTTTATCATA  
CATACAACCATAGGCTAAGTCTTAAAAATAATTATGCTTAGTTAAGAAGTCAGACAAAAAGGTAAGAGA  
CTGTTAGGAGCTGATTTAGCGGGTTAAAGCTGGCAATGAAAAGGAGAAATTAAGCTACCTCAAGATA  
GAATTGATGAGCTTTGATTATGAAATGATGGTAAGAGAGAGGGCCATAGACTCTGAGGTCTGTCTTAGC  
TTTGGTTTCCCTATGTGGATCATTATCTATTTGGATATAAGAATTATCTGAAAGATGATCTTAAAGCATG  
TAAGAAATGATAAGCTACCTGTTTAAATGATGAGCTTTTGTACCTCCAAGAACCCCAAGAAAGAACATCC  
TGTAAGCAGACCTTACTTACTGTTTAAAGGAAAACAAAATTTCCATTTGTCTTTTTCATCAACACA  
AGTATAGCTGGCTAATAAAAGTGAATATTATGAGAGAAAAAGAAAGAACACGCACACACATACACTC  
AACAGGATTCTTAGAGTCACTCCATGGATAAGAGGGAAGGAAAGGTTGAGGGCAAGAGAGAAGGGAAG  
GAAACAGACTATGATGGGATATCTTAGGGCAAGAAATAGGGGGCTGATTTGGAAGGCAGCAACTTCAT  
GGATACTTGATTTATTTAATGTCCCTGTCACTCTGGCGTATCTTAATGTGTGTGGTGTGATTTATTTA

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GTCACCTTGATCCAAATTTCTCTAATTAAGTGGAGCTCAGAAGATATAGTGTCCATTGTGGTCAAGGGCACA  
GGTTTTGGCTTCAACAGACAAATAAGCTCTCTGAGCATCTGTCTCTCATCTGTACAAATGGGAATATCAG  
TTCCTACCTCTTCAGGTTGTTGTATTATATAAATAAATTGTGTACAAGAAACATTAGGATTGCTTCTTACC  
CGTAGTAAGGGCTCAACAAACCTTCTCCTCCTTCTCCTCCTCCTTCTCCTTCTTCTTCTTCTCCTCCTC  
CTCTTCTTCTCCTTCTTCTTCTTCTCCTTCTCCTTCTTCTCCTTCTTCTCCTACCTCCTTCTCATTATTGT  
TATTAGGTAACCACAATATTATCAGTAATGATTGGAGAAAGCTTAACTCCTAGTTACCATTAGAAAA  
CAAGAACACATTTTGGTGGTTATTACCCGAAGTAATCATAATGTCACCTTTTTTCCATCTGACTCATTA  
TCCCAAGTGATTATTTATATATGGAGTTTCTGAGTCTTCTTTTACATATTACAAAAAAGAGTGTGA  
TTTAGGACGAGCAAGCAAGAAATAAAAAATTTAGTGACTTTCATTCTGCCTGTGCCCCAATTCTATTGGGC  
ATAAGGCAAGTAATTTAAATTTCTTAGCACCTTAGCATCTTCTACTCAAACAGAAATGAGGAACAGTCAC  
AGGTTACTATTATAGCTGTCTAAGTAGAAGGCACACAAGTTTTTACACTGAGTATAACACTTTATAGAAA  
GCTAAGTGTGTTGCTCAAGTTGGTACATTTCTGTAGATGTGACACTATGGCACTAAGAACTTAATGCCA  
CATTGAATTCATTAGATAGCTAGACTTTAAAAATAATTACTTGACTTCACATATAAGTATGTTCTGTAT  
TGCATTTACTCCATCTAGTAGAAAAATAGACCTTGTGAGTTCAAATCCCTGTTGCATTAAATTCACCAGTA  
ATGAGACTTTTTCATTGAGTCAGCAGGGTTTTTCTTGTGTTTTCAGGCTTTGTGGATTGTGACCTCC  
ATGATCAGGTCACCTTCTAGAATGTGCCCTGGCTAGAGATCCTGATGATTGGTCTCGTCTGGGCTCCAT  
GGAGCAGCCAGGGAAGCTACTGTTTGTCTCCTAACTTGCTCTTGAGCAGGTAAGTGACCTGGCTGTAGCTT  
AGGAGTAGCATGTTCTTACGATCATAGTTCAATCATGAAACTATTTTATTCATCTCTCGGTGAAGCTTC  
AGATACTTTTATACCAATAGCTTACTTAAACAAAGAGTGCATTGGGGGTGATGAAGCCTAGTCAAAATCA  
CAGAAAGCTAAGGATAACTTTCTGTAGACATTACCTCAGAAGAATCTATTATTTCTAATACACACACA  
CACACACACACACACACACTCACACT  
ACTCCATCTTCAACTTGTATCATATAAAAAATTATAATAACCTCTCTTTAATTAATCTGTTGTTGCTTC  
TTGTACATCCATCCACCAATAGCTTACTTATTTCTTCTCCTTCTTCTCCTTCTTCTCCTTCTTCTCCTTCT  
TGACCAGAGTTCTGAAGGTCACATTGAGTTCGACAAATTCATTTTCATGTTCAAATATGTTACCTTCTTT  
AACATACCATTCTGGGGTGGCTTGGGAATGTGGGTCCCATGTTTTTTTTTTTTCAGTCATTGCTTAGAG  
TCATAGAATTTAGATATTACTCAATAGCAGCTGCCACTGATAGAGTCTCCACCCTGCACCAGCTGTGATG  
CTAAACACTTTTACATATTATCTCATTTAATCATCACCAGACTCTAGGAGGCAGGAATGTCTCATCTCC  
ATGTTTTACCAGAAAGGAACTAAATCTCAGAGACATCCTGCTACTTGCAAAAAGAGGAAAGCTCACTAA  
ATGGTGGAGCCAGAGTTCAAATTCAGATCTTTCTGGCTCCGGTATGCTCTGTACCTCCTGTGCTGGGC  
ACATGGTCTTCCCACTCTCATGTTTCAGTGATGCCCTCCTTGGTCTGCTGCCATAGCATTCTGTTTCCAG  
GTAAATCTTGTCTTTTGGGGTACATAACATTTTGGATGAGAAAGAACCATTTTGTGTTTCTTGCAACT  
CTATTTTGCCTCCGTGCCAAGCAGTCTAAGGCTGCCAGGCTGCCACAGTGCATCTCTGCATGGTACTTT  
ACTTCAGAGCATTTCATATCTTTCTACACCTGCCAAGTGCCTGGAGCAGAGTTGCAGCAAAATTTATTT  
AAGTACTGGAGAATTTACAAGGTGTTGGTTATTGTTTGTGCTTTTGTGTTAACACAGCTTTTGA AAAA  
CAGTGGTGATCAGCTTATAAGAACATTTTGTCTGTCTGTGGAATATATTTGATATCACAGTTTACAAA  
AATTATCAAGAAATGGCCACTAGTCTTGTTCCTTAGAACTGTAATGATGATGATGATGATGATGATGATG  
AGGATGCTTTTACCGTGTCTTCTCCTTCCATTCTTGTTCCTTCCATTTTTTCTCTATCTCATTTCTC  
CTCTCTTTTCTCTTGTCTTCTCTTCTTCTTCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
TGGTTTTTGAATGATATCAATTTTGAATGAAATCTTAGACCACACGTAACATTTTCCCTGCCT  
ACTGCCTGGAGTGTCTACCATGTTTAGGTTTTTGGACATTCATAACTCATTTGCTCCTTGATTTCATCC  
TCATCTGTATCTATCTCTTTTTTAAATTTAATTCAATTTTATAATGTTGACACAATTATGCAGATTC  
ATAGGGTACACAGTGATGTTTTGATACATATAATGTGTGGTGATCTTATCTATCTTCTTGAGTACACACT  
TGCTTAGGACAGCTTATCAAAATAGCATTTTGAATATGTGAAGTTTTTGAATTAATGATGATGATGATG  
AACTCATATTGCCAGTGAGGTGATATGGCCTAGGATTTTATCAGCTACAGCCTTCTCTTCTCTTCTGTA  
CACTCCAGTGGTGGCTAATTTCTTCTCTCTCAGAGAAGTATGAATGACTAAAAGTTCTCATCTCTAT  
TCATCTCTACTTTCTAAACTTCAGATCGGAAATTTGAATTACCTCTAGACCAGGATTTGTGAGTCTCTT  
TACTATTGACATTTTGGGTGAGATCAATTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTT  
GTCTCATCCAAATCTCAAATATAGCTCCCATAGTTCCCATGTGTCATGGGAGGACCCGGTGGGAGGT  
AACTGAAACATAAGCAAGGTCTTTCCTTGTCTCTCTCATGACAGTGAATTTCTCATGATATCTAATGG  
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CCTTCTTCCCATGATTGTGAGGCTTCCCGTCAAGGAACTGTGAGTCCATTAAACCTTTTTCTTTG  
TAAATTACCCAGTCTCAGGTAGGTCTTTATAGCAGCTTGAGAACAGACTAATACAAGGGGCTGTCTTGT  
GCATTTTAGGATGTTTAAACAGCATCCCTGGACTCCACCAGCTAGCTGCCAGTAGCAACCTCCACTTCCTC  
CAGTTACGATAACTAACAATGTCTCCGGACATTTCTACCTATCTTCTGTTGTGTGAGGGGTTGGGGGAGG  
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ACACTGTACTCTAACTGCACACTCACTTTATCTTCTGCAACAAGTCTATTCCTTTTCTTCTGTCTTG  
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CACCAAATTATCCAGTTAACTATCAAGTCATCTATGAAGTCTTGAATCCAGACCTCCCTCTATCCC  
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CAGCTGTGATCATGATGTTCTGACTCACCTTTTCTGAGTCTCTCTCAATTTCTTAACATGGAGAAACCCC  
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TGAGGCAGGAGAAATCGTTGAACATGGGAGCAGACGTTGAGTGAGCCAAAATTTGGCATTGCACTCC  
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GAATCACTATTACAAGTGTCTCAAACGCAATTTCTGAAGAGTCACAGGTGACCCAGTGAGCCCTTGTCC  
AGGCTAAAACACCTGGTGGCTGAATTTCTGAACCTTCAACATTCGAATTTCTTCCATTGCTTCTGAGA  
GACCCTCCACCATACGGTTCTTATCAGAGTCATATCTACCTATAAGGCTCATTTCAGGTGCCGTCTTT  
TTATAAATCTTCTTCTTCAACTTCTCTCTCTCTCAGCCTTTATATATACAAAAGGCTTTTCTTCTTTTCC  
TTTTCTAAGTTTCCATTGTAGTTGGTTTGTCTTTCTCTTTATTTCTTCTTCTTCTTCTTCTTCTTCTTCT  
TTGGATGCTCT  
TGTGTGATCTCCAGTTTACGAAGTCTTCCATGATACCCAACAATATTTGTTAATTGCACTGGCCAAGGT

FIGURE 1, sheet 76 of 94

[illegible]

CAGCCTACAGAGTAGTTGGGATTACACGCATGCGCCATCATGCCCTGGCTAATTTTTGCATTTTGTAGTAGA  
GATGGGGTTTTGCCACGTTGGCCAGGCTGGTCTGGAACCTCCTGGCCCTCAAGTGATCTACCCGCTTGGCC  
TCCCAAATTTGCTGGGATTACAGGTGTGAGCCACCACACCTGGCCATCAGTTCTTAATTTGATGAATGGA  
TAGAGGTTTTGGCTTCAAATAAATGGAGTTAGTCTGTCAATATCTGTTCTTTTAAATTTGCAATTGTTT  
TTATTTTGTAGTGTATGTCCTTAAATGATCTAGAATTAAGTTCTAATCTCTACCCCTGGTATAAT  
TGATTTCTCCCTGGTCTCCTAATATAAGAAGAAAGATGAAGTTTTCTTTTAAATGCTTTTAGAGATCT  
TCATTAAGTCATTTAATATTCTTATTTGCTATTTCAGTGTGATGGTTAAGACTGAGTGTCAACTTGAT  
TGGATTGAAGGATACAAAGTATTAAATCCTGGGTGTGTCTGTGAGGGTGTACCAAAGGAGATTAAATTTT  
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TATAAGGCAGGCAGAAAACGTGAAAGGGGAACTGGCCTAGCCTCCCAGCCTACATCTTTCTACCATGC  
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TTATATATATCCTATTAGTTCTGTCCCTCTAGAGAACCCTGACTAATACACCCAGTGTGTCTTTTATCA  
AATAGAAAGGAGATATAGAAAACACACTGTCCATGTCTTTGATTGTTACACCACAGCAGAGAATCAATTT  
CTTAACCTGCTTACTATTATTACCATCTCCAATGGTGCCAATTTCTGAGATCCATCATGACTTTATCATTA  
GAAAAGGGGATGTAACAAACATGATGAGATGTTACGGGAATACTGCTTACTGCATGATATGGTTTGGCTG  
TGTCCTCACCCAAATCTCATCTGAATTTTAGCCTCCCATACTTCCACAGTGTGTTGGGAGGGACCCGGT  
GGGAGGTAATTGACTCATGGGGGTGGTTCTCCCATACTCTTCTCTGGTAGTGAATAAGTCTCACAAAGA  
TCTGATGGTTTTATAAGGGTTTTCCCTTTCAGTTGGCTCTCATTCTCTCTGCGCTGCCATGCAAGA  
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CCACCTTAGCCTCTGAGGAAAGCAGAACCTGAGAGCATGCTTAATTCAGAGTGTGTGACTTGGAGTGT  
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AAGACAGGAGAGAGGTAGATGTTGAGCACTCCGAGGAGTTTTCTCTCATACATGTTGGGTTTTAAAGTGC  
AGGGAAGATATCTGAAAGTTTATTCAGGCGAGAAATTTGGAGCTCAGAAGAGACATCAGAGCTGAAGATA  
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AAAGGTATCCAAAGGCTGAGGTCAAGACCTCTTAAAGGCTGACTTTTTCAGGGTTTTAGGTAGAAAAAG  
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TGCTTTTCAAAGAAAAGGATGGGCGGGTGCAGTGGCTTACACATGTAATCTCAGCACTTTGGGAGGC  
CGAGGCTGGCAGATCACCTGAGGTTGGGAGTTCGAGACCAACCTGACCAACATGGAGAAACCTGTCTCT  
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GCTGAGGCAGGAGAATCACTTGAACCTGGGAGGCAGAGTTGCAGTGAGCCAAGTTCTCACCATTGCACT  
CCAGCCTGGGCAACAAGAGTGAACCTGTCTCTCAAAAAAAGAGAGAAAAAGAAAAAGGATGGT  
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TTAACTAAAAATATTATGAATTTTTCAAACGAAATAATGAGAGAATAATACAAAGAAATCTCATCTGCC  
CATAATCCAAATTCAGTAGTTATTTAAATTTTGGCCCATGCTTAATCCATTAAATCTCATTTCATTTTGT  
CCTTTTTCTTTGTTTATTTTGGCTAAAACATTTTAAAGCAAAATCCTAAATATCATACATCAGTAGGCA  
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CAAACAGTTCCATATATTAGACATTAGGTCATTAATGTCTGTCTATTGAAATTTATAACAATTTCCACT  
TAATTTATTTTCTCCAGCTTCTGTGGAGACTAGGTAAGTTGTTTGTAGCTGTCTGGATATATCTGATTG  
CTTCTGTGAGTGTCTTTAACTTGTCTCTATCTCAGTGTCTTGCACATGGAAGTTAGCCTCATAG  
CAGGGGTTGGCATACTTTAGCCTGCTTACCAATACGACTCCTTTACATTTTTGTAATAATAAATGTTACT  
GGAACACTGTACATATGTTGGGGTCATAGAAAGAGTTTCCGTGTCCTCAAGTTATAATTGCATTCACTT  
ATATTTCTTCTAGTAATTTTACCCTTACATATTAGGGGTCATTTGGAATTTCTCTTATATACAGTA  
TGCAATAAAGAAATGGCTTTTATATTTTCCAAATGTATATTCAAGTTGTCTCAACACCATTTATTAAGAG  
TCAGTATTTCTCAAGTATTGAGATCTACCTTAATTACACAGTAATTTCTCTGTAGTCTGTGCTTTT  
TCTAATATGTTAATCTGTACCAAGATTGTTTCATCTGTTAATGGATCAATATCACATAGCTTTGTTTAT  
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AATTTATTGATAATTTTATTGAAATTTATGAAAATATAAATTTGGCTTAGGAAGTACTGATATCTCCATGA  
CATTAACTCTCATATCTAAGACCAAGGGGTGCCTTTTCAATTTGTTAAATATTCTTTGTGTCTTTTCAGAA  
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GGGTAAAAAATATTATACCTATTTTATATAGATATATATGATATATAAATAATATATATATAGTTA  
TAATACATAAATATATTTTAAATATATTATATAATATATACATGATGATTGATTATATATATGATTTATAG  
TGTATCTATAAATATACATATGATGATCTATAAATATACATGATGTGTACATATACACATATATACA  
CATTATATGATGTTTATACACATATAAATACATATATAAATATACAGAAAGTCCATGGGGTTTCCCTAG  
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GTGTGATGCTTCTCATCACGCTTTTTTTTTTTTTTAAACAGTGTAAACATCCATTACAAAAATAGTTTG  
GAAGTTTTTCTTTTTTTTTTCTATGTCTGGAAGGTGTAAGTAGAATTGGAATTTATTTGATCTTTAAG  
ATGTAATAATATTGGTAGAATTTACCTTTGAAAGCACCTGGACATGGTGACTTCTTAATAGGTGAGCTCT  
CTGGAACTTTATTTCTCTGTAGTAATTTGGTCTCTTAGACTTTCTATTCTTCTGGAGTCAGATATTG  
TATATCAAACTCTTCTGTTAAAGTTATCCATTTCTTCTGGTATTCCAATTTTTACATTGAGTTGGACAA

FIGURE 1, sheet 78 of 94

1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2

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GTGACCTACAAAGAGACTTAGACTCCCACACAATAATAATGGGAGACTTTAACATCCCCTGTCAACATT  
AGACAGATCAACGAGACAGAAAATTAAACAAGGATATCCAGGAAGTGAAGTCTGACCAAGCAGAC  
CTAATAGACATCTACAGAACTCTCCACCCCAATCAACAGATTATACATTCTTCTCAGCACCACGCCGGA  
CTTAATCCAAATTTGACCACTAGTTGGAAGTAAACACTCTCAGCAAAATGTAAGAACAGAAATTAT  
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CCTATTCAACATAGTGTGGAAGTTCTGGTTAGGGCAATCAGGCAGGAGAAGGAAATAAAGGGTATTCAA  
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AAGAGCTTCTGCACAGCAAAAGAGAACTACCATCAGAGTGAACAGGCAACCTACAGAAATGGGAGAAAT  
CTTTGCAATCTACTCATTTGACAAAGGGCTAATATCCAGAATCTCAATGAAGTCAACAAATTTACAAG  
AAAAAACAACCAACACATCAACAAATGGGCGAAGGATATGAACAGACACTTCTCAAAAGAACATTT  
ATGCAGCCAACAGACACATGAAAAATGCTCATCATCACTGGTCAATCAGAGAAATGCAAAATCAAAACCA  
AATGAGATACCATCTCACACAGTATGAATGGTGATTATTCAGAAGTCAAGGAAAAACAGGTGCTGGAGA  
GGATGTGGAGAAATAGGAAGACTTTTACACTGTTGGTGGGACTGTAACTAGTTCAACCATTTGTGGAAT  
CAGTGTGGCGATTCTCAGGATCTAAACATAGAAATACCAATTTGACCCAGCCATCCCATTTACTGGGTAT  
ATACCCAAAGGATTATAAATCATGCTGCTATAAAGACACATGCACACGTATGTTTATGTCAGCACTATTC  
ACAATAGCAAGACTTGGAAACCAACCAATGTCCAACAAATGATCTGGATTAAAGAAATGTGGCAGATAT  
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GGAAACCATCATCTGAGCGAAGTATCGCAAGGACAAAAAACCAACACATGTTCTCACTCATAGGT  
GGGAGTTGAACAATGAGAACACGTGGACACAGGAAGGGGAACATCACACACCGGGGCTTTTGTGTGGTT  
GGGGAGGGGGGAGGGATGATTAGGAGATACACCTAATGTAATGACGAGTTAATGGGTGCAGCACACCA  
ACATGGCAGATGATGCATATGTAACAAACCTGCCATTTGTGCACATGTACCTAAACTTAAAGTACAA  
TAAAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAA  
GCCTGTTTACATACATAAAAGGATACCATTTACCTGTCTTCTATATGACTTTCTCTTAAATCCTTTTATT  
TTTTGTTTTAATTTTTATCTTCACATCCTTTATTTCTGTCACTGTGTGTCCATAGAGTTTGTCTGTGT  
GTGTCCTTATAATTAAGTCTATGTTCTGAATGTTTTTCTCTTTTGTAGAAATTCAGTTCTAAAGTGTAA  
TTTTCTGATTTTTTTTTTCTGTTGCTTACCATATCATTTCTGAGTTTCTGTTTCTGAAATGTGCAACT  
AACTCTTTCAAAGCATTGACCAGATTCTTCAGTCTTTTTAATTCATTCTGAATAAATCGGGCTACAGTTT  
CATCTGCTTTGTGGACAGAGTGCCACAAAGAGCCGAATGTGAGTGCAGACCCACATGAATCATAGATC  
TTAACGAAGTTTTTACTAACGACTAGCAAGGATACAGCTAAAAATGGGTACAAGCAAAACACAGCATCA  
TTCTACCTGTAAGAGCTGAAGTATCATGGAAGTCAAAAGGATCTCTCTTCTTGTGCAATGTG  
TTTTGATTTTTTGGAGTGATAGATGTTTGCTAACTACGCACGTGACAAAAATTTGCTTAGAGGAAGCCATG  
TTAGTTTTGATGCTACTCAACTTTGTATTTTGTAGTCATGAGATAGAAAGCCTGTGAGATTACGTGCCC  
TTCTTTTAGCAGCTGCATCCATAAACTAAAAATTCAGTTTTGTAAACCATGAACAAATTTAGTCAG  
ACTTAATATATCTTATTTAAAAACATCTTAGATAAGAACTTCTTTGTATTTTGTCTAATATACAAATCCC  
ACCAATGTCTACAGAAGGGCTAGTTAATCAATATACCAAGATCAATCTATTTATATGACCAACAA  
TACAAACATAATATACATATATAATTTATATAATTTAATTTATATATATATATATATATATATATAGCAGCA  
ATCAAACTATCATGATTTTGGGATGAATTTAATAAGAAATAGCAGGAGCTCTGTAGAAACAAAGTATG  
AACTTCTATTGGGAAGACAGTAATATCATAAACATTTAAAAAGAAAGCTATACCATGTTTATGGTTAGGAA

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GATTCATTATTGAAAAACATCAATTCTTGATAAAATTGGTCTATAAAATTCAGTGCCTGTCCAATCAATAT  
 ATTTAGCTCATTAAAAATGTATATGGAAAAGGCTAAGTACCAAGATAATCAAAATGCTCTTCCAAGATGA  
 AAATTAAGTTGAGAGATGGGGTAAAAAACTATAATTCAGTTCTAAAGTCATAAGCTATAATAATTAAT  
 ACAGTATGGCATTGGCATAGAAATAAGCACATTGACTAAATAAATAGAAAAACAGTTCCAGAAACCAACC  
 TCTACATTTATGAAAAACTGACCTATATCAGAACGAGCATTGAGACTACAGGAGAACAGAGGAACATAGTA  
 AGTTAATGGTCCTGACACAATTGATATCTACATAGAAAAAACTTAATCCTTCTTTACTCTATGTAAA  
 AACAATAATTCCAGATGAATGTAGGACTTAATGGAGAGCCAAAACCTAAACCTTTTATAGGAAAAACATAGA  
 AAAATACCTATCTCAGGGTCGGAATTAGGTCTTCAACATGGCACCAAAAGTACTAACCCATAAAAGAAAC  
 ATTAATAAAGTCAACCTTTTAAAAATCAACAACCTTTAATTAAAAAACAGGGCCAGGCGCGGTGGCTCAC  
 GCCTGTAATCCCAGGAGGCGGATCAGAGGTCAGGAGATCGAGACCAGCTGGCCAAACATGGCAAAACCC  
 CGTCTCTACTAAAAATATAAAATTAGCTGGGCGTGGTGGCGGGTGCCTGTAGTCCCAGCTACTTGGGAG  
 GCTGAGGCGAGGAGATGGTGTGAACCTGGGAGGCGGAGCTTGAGTGAGCTGAAATCGTGCCACTGCACT  
 CCAGCCTGGGCAACAGTGTGAGACTCCATCTCAAAAAACAAAAACAAAAACAAATCAAAACAAAAAACA  
 AAACACAGGTTGCTGGAAAAATGGTTACTTATTTTATTATGCTTTATAAAATATACAGTTATATTATCA  
 AACTTCTTTTGAAGAATCAAAATATTATGCTGAGAAATATGGCAAGAAAAAGAAAAACAACTCCACCCT  
 CATAATGGCATTCCCTTTACCCACCATCAACTAAGTCAGGAACCTGCGTCACTTTCAAGTTTCTGAAAT  
 GTGGACTGAAAACTTGTGGAGGGCCCTCAGAGATGCATTTAGAAATGGTATGTTCTGGAAAAATGGAAC  
 TGAATATGTTTTCGAGAGCTCATGGGCCAAAACCTTGAATAGAGGTTGGTGGAGTTTCTATAGTATGT  
 AATTACAACACAATAAGACTCAAAAGCATTTCATTAAGTGTGGTGGAAGACAAGATACTGCTTCAAGG  
 GCTTCATTAGCTTTCTGCACTGGAGCTCTCCAAGGCATGGGAGGAACCCCTGTTTACCTTTGGTTCAG  
 AATCAGTTTAAACCATATTGAGGGCTAGGTGAGAGTGCAGCATTAACTCCTTGGGAATACACTGGGTGG  
 GGAAGAAAAAGAGCAATGTTTTCTAAAAGCCAGAAATGGGCTTACTGTGTTTACCAGTTGTTTCCA  
 GGATAATGTATTGACAGCCCAATTTGCTGATGAGATGGTAGGATTATACCTCAGTCCCTGCTTTCAATTTA  
 TTTCTTAAAGAAGCTTCTGGTAAATAGAGCAATAGCATCGGCTTAGTTTAGTGTGTTCTGTTGGACTA  
 AGGATATCAGTTCTATCCGTATGGGCGGGCCATAAGCCTGGGAAATATTAATGAAGGAGAGAGGGGGA  
 GAGAGTGAGCATGCAAAAGAGAGAGAGAAAAACAAATAACAAAACAAAAACCAAGACATTTCCCTTTATA  
 GTAAGAATGATGAGGAAAAACATGTTTAGCCATACAAGATATCAAGATAATCTCTTATTCTTTCTTGAAA  
 ATGCAAGTACAAATGCCTGCAAGATAAAATATCCTCTGGATGGAGTGGAAGGTTTACCAGGCTCTGA  
 AATCACGTGAATGATGTTGCGCTTTGCTGTAAATGAAGCTCGGTGCATTTTTCATTTCACTTTCTACTAA  
 GCATTTATGAGCTATTACCTTTCCCTTTCCCTAAACTGCGTTGTTTTTAAAAAGCCTTAGAGGCATTCCCT  
 TCTAGAAAATAAAGGTAAGTGTAAAGTGGTGATAATTGGTAATAGGTGTCATGCTTGTGGTTTATAATG  
 TGTACCTACACATTTTCTCAATTATCCCTAGAACAGCTTTTGGAGGATATGAAGTTAGACCTTACAAA  
 GCACATCTTTCTGCTGGAAAAATGAGGTTTATAGTGGTTAAGTTTAGTTGCTTATGATCACAAGGCTAGA  
 GAGTGGCTGGAATCAAGACTCTTCAACCTGATTTCAGTGCTTTTTTCACTCCACCATTAAATTTATTGTT  
 GATAAATAATATCAACACTTTCTAGGTGATTAGGGTCATCTAGAGGACAGGACTAATAGGATAGATG  
 TATATATGAAAAGGAGTTTATTAAGGAGTATTGACTCACACCATCACAAGGTGACGTCCACAAATAGGCC  
 ATCTGCAAGCTGAGGGGCAAGGAAGCCAACTCTGAGTCCCAAAACCTCAAAATAGGGAAGCTGACAGTGC  
 AGCCTTCAGTCTGTGGCCAAAGGCCAAGAGCCCTGGCAAAACCACTAGTGTAGGTCCAGAGTCCAAAA  
 GCTAAAGGATTAAGGTAAGTGTAAAGTGGTGATAATTGGTAATAGGTGTCATGCTTGTGGTTTATAATG  
 ACAGCCAGTCTAGTCTTCCACGTTCTCTGCTGCTTTTTATCTAGCCACGCTGGCATGATGATGACAT  
 GGTGCCCGCCAGATTTGAGGATGGTCTCCATCTTCCAGTTCACTGACACAAATGTTAATCTTCTTTGGT  
 AATACCTTCACAGACACACCAAGGACAGCACTTTGCATCCTTCAATACAATCAAGTTGGCACTCAGTAA  
 TAACCATCACAAGTCCACACCTTTGCACTTGTATCCACATACATCTCTTAAATCATACATAATCTCCA  
 AATACAGACAATAATGTACATAATTACCCGAACATAATACAATATCGTTTATACACACCAAGAAATGACCC  
 AATTCCCAAAACCAATGTTATTACATAAAGTTAACAACACTTAAATGCTGATATGAAGTCAATAAATACT  
 TTTTTTTTTTAAAGATGGAGTCTTGTCTTTGTTGCCAGGCTGGAATGCAGTGGTGCGATATTGGCTCAC  
 TGCAACCTCCGCTCTCTGGGTTCAAGCAATTTCTGCTCAGCCTCCGAGTAGCTGGGATTACAGGCAC  
 CCACCGCCACACCTGGATAATTTTGTATTTTATAGTAAAGACGGGGTTTGGCATCTTGGCCAGGCTGGT  
 CTTGAACTCTGACCTCGTGATCCACCCACCTCGGCTCCCAAGTGGTGGATCCCAAGTGTATCCACCC  
 ACCTTGACCTCCAGGTTGTAAGCCACTAAATCTTATGTCACATGATACAGGAAAAAGAAAGGAAGTAAA  
 ATGAGATATTGCTTAGTACAAAGTGTATACATGCAGAAAGATGTTCTTAACAAAAAAGAGGAAATAC  
 TCATGACAATTACAGTAACCTGGTGTGCAACTCATCACATGGTCGTAGCTGTTATTGATGACTACCTT  
 CTTCTACAACCCATTCTGTTTCCCTTTGCCTCTAGCAAGTACCTCAGCAGGTGATGGTCTTTACCTGG  
 TGGAGTGTCCAAACCTTCACTCTGAAGGGTCTGGGCCATTGTAGTCTGCTGGATCGAGTTGTTGT  
 CATTTTTTATTGACCTTAATCACAGGGCATGGTAATACTAAGAGACACCTTAAGGAATTTCTGTATTCC  
 ACACATATTCTTCTTACCTTCAATATGGAGTAGCAGACTGAGTTCATCTTGTATAGGCTAAGTCAGTCAC  
 CCCAGCCAACACTAATCTTTCTTAGCCTGTTGACTTAGAGGTAGGAGGAGCCGAGATTGCAATCTTA  
 ATTTCCAGTTAATGAAATCATTATTGTGTCTCCTGGCGGCAACATTCATCGCCCTGGAACCTGAGACTTC  
 TAGGCCAGCAGAACGTAATGCTGTGGAACAAGAACAAAAATTTACTAGCGGGTCTCTAGGGGTGATGG  
 TGAGTGGTGCCACTTCCATTTCCACCCCTTGATTCTGGACCCATGAATCCTGGCTATGGGAGAAACAGT  
 ACCAATACTGGACACTGATCCGGAGCCTACACAGCCTTCTCGAAAACCTTTGCCCCAGCCCTGCAAGTA  
 TTGTGCGCTAGTTGGCATTGTAATTGTGACTTCAAAAGGCCATTCCACCGTTCTATCAATCCGGCTGCTT  
 CAGGATGAGGGGAACAGGGAAGACCAAGTGAATTCATTAAGCATGAGCCCACTGCTGCATTTCTTAGC  
 CATAAAGTGAGTGCCTTGTTCAGAGGCAATGCTGTGTGGAATGCCATGACAGTGGGTAAAGCATTCCATA  
 AGTCCATGGATGGTAGTCTTGGCGGAAGCATTGCTGAGGATAGGCAACCCATATCTAGAGTAAGTGC  
 CCATTCCAGTGAAGACAAACCACTGTTCTTCTGTGATGGAAGAGGTTTCAATATAACCTGCCACCA  
 AGTAGCTGGCTGATCACCCCGAGGAATGGTCCATATCGCGGCCTCAGTGTGTTGCTCTGCTGCTGGCAA  
 ATTGGGCACTCAGTTGTGGCTGTAGCCAGGTGAGCCTTGGTACGTGGAAGTCCATGTTGCTGAGCCCGTG  
 CGTAACCTCCATCCCTGCCACCACAGCCACTTTGTTTATGGGCTATTGGGCGATGACAATGGTGGCTGG  
 GGAAGAGGCTGAGTGGTATCCACAGAACGAGTCATCAATCCACTTGATTATTAATCCTCCTCTGCT  
 GAGGTCATCTTTTGGTGAGCACTCACATGAGATACAAATATCTTCAGTTTTTGACCACTCAGAGAGGT

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1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation  $f(x) = \int_0^x f(t) dt$ . It is shown that  $f(x)$  is a continuous function and that it satisfies the functional equation  $f(x+y) = f(x) + f(y)$ . The function  $f(x)$  is also shown to be differentiable and its derivative is found to be  $f'(x) = f(x)$ . This implies that  $f(x) = Ce^x$  for some constant  $C$ . The value of  $C$  is determined by the initial condition  $f(0) = 1$ , which gives  $C = 1$ . Therefore, the function  $f(x)$  is  $f(x) = e^x$ .

AGTCCCAGAGAGGCTCTTAGAGGGTTGAGGAGGATGGGATCAGGCATAGCAGAGACTAGGGACACGAGG  
CTCTGCGGCCAGACTGCAGGTCTGCTACCACTACAGTGTGATTTTGCCTAGTCACATAATCTCTGTGGG  
CCTCAGTTTTTTGTTTTTTGTTTTTTCTATTACAACAGTACCTTTCTCGTGGAGTTGTAGTGATTAGAT  
ATCTAGTACCAGACTATGCTTGTAGCACTGAGTAAGAACTCAATGAAGGTTAGCTTTCATTGGTACTA  
TATTACTATTGTTAGTGTGGTGGTGGAGCTGAATCGCCTAACCTATGAGGTTGGTGCAGAAATGAAGAA  
AAGAAATAACAGTGTGTTTTAAGAAGTTTGGTCACTAGAAGTGGAGCTTAGTAATTAAGAAAAAGAGTGAAC  
ACTTTTACCTTCTTGTGGAAGTTAGTAAGTCTACAAAATGTTAATTCTGCATTGAATGATCATTTGGGA  
GACTCTTATTGCTCTATTGCACTGAAAAAGTCACTGAATCATTTATTTAGAAGTGAATAACGCCTGAG  
ATCTAGGCCAGCACTTTGCAAGTTGTGCTCTATGGGACTTTTCATGGAAGTGGCTGAGGAGTTGCCTTGA  
AGGAAGGCAGAGGGAGTGGGTCTTGGGACACCCCTCCAGTTATAAAACAGGACGTTGATTCTGTTTTGTA  
GTTGCAGCATCACATATAATTTCAATTTATTAAGAGGATCCCACTTCTAAAAATAAGTTGAAAACCACTGA  
TTTAATCCAGCTCTCTGTTTGCATATGAGGAAATGGAATTCGGAAAGGTTAGGTGATTGTCCAAGGT  
TGCAGACTAGACTATTTATTAATAGAGTAGGGTCAGGAACAAAAGCCTGCTCCTTGTGGTCCAGCGCCT  
GTTACTAGTTACATAATGAATGCTACCTATTGCTGCACAGTCCCAATCATTGCACCTTTTCAAGATTTTAC  
TCTAATCAAAAGAAAAAATAAAGTGCACCTTCCAAATCAGTACTTATATGCAAGAGCTTCAAGAAACAA  
ACTAGTATTTAACTTGGTGGTTACATATTGACTGTATTTTCAATTGAGTGAGGTTAGAAGAGATTGAGAAG  
CGTGAATGAAGTTACAAAGTAGAACTATATGGTGAACCAAGGCAAGAGATTGCTCATAGTAAAAGAAAG  
ACAAAATAAGAAATGAAGAGACAAAAGAAATGCCAATGAGTTGTAATCTTAAAGAAAGATATATTTAAT  
AAAAATAGGATTGATTTGTTTTGAAATGTGGGCTGAGAAGTCTGCCATCTTCCATTGACTCTGCTCACGGC  
CTTGTTTGTGAAGTGGCTTCCATGGATAGCATTACTCTCTGACAGCTGCAGCTCCAAATTCAGCATGAA  
AAGGCTGGCAATTTCTAAGAGGAAGGAGTGTTTAGGCCACTTTTAATTTACTTTGTCTATTGCAAGTTTC  
TTGCAATGTTTTGGCATTGTTGGTCTTCTTACTGGATTTCAAAACAGTAACTTTTCTAGCCTTGG  
AACCAACACGAAAAATAACCACTCTTACCCTCATGAAGAACACTTTAAATTTTCTCTTTTAAAAAATGA  
AGTCTGGAATATCTCCAAACATCTTGTCACTCACGCCCTTCATTTAAATGTCAACCTCTCAACCACAAGGA  
AATAAAATTTGCCCCCTACTTGTCTACTCCTGTTTTATTTTCTAGTAGAACATACTACAGTTGGAGATCA  
TCTCATCCATGTCTTTTATTTCTTCTTATTTGCTCTGCTTACTGTAAGCTCATGGAAGTAAGGG  
ACCTTCACCACTAGCAAGTGTCTTAGGACCTAGTAAGAACCTGGTCAATTCCTAAGTGAATGACTG  
AATTCCTGTGAGAAGTCAACATGAAATTTCTAGGTCAATAGTTTAGTTAGTTATTTGGAACCTCAACACTGTAT  
TGGAAAAGTGTCTGGAAGGATAGTTAGTGGATTAAGGTTTTTATAAGAGGAAGAGGGAAAGAAAGGC  
ATTGTCCTTACTTCAGGCATTTCAATGGCCATGATGGAGCCTAAATATTGTATGTTGCATTTTGTGTTTGG  
TTTTGTGTGCGACAAGAGCTTGTACAGTGGAAATGAACGGGTTAAGAAATGTGAGTTTTCTTTTCTCTGTC  
TATAGAGACTTAAGGAATTTGCCCGTGTGAGTTCTCTGAGGGCAGAGAAAAATACAAATCCATGAATACC  
TGAAAGCCCTGATTTGGCCCTTAAGCAATCTATGCATGTAACAACATTGCATTTGTACCTGTACATTTA  
TAAACATTTTAAAGAAAGTATAAGAGAAACACAAATTTTGGTTACTCCTCTCTGAAAAGTGCCTGTATGT  
CGCTTGGCGGGGAATTAAGACCTCTTCCCTGTGGCCTGTGGCCACTATGTCTCCCGCTCTCCAGGCT  
CATCCAGGGCCACTGTGCTTGGGTCACAGGGTTCCAGGATGTCAACCTTCTTTCACTTCTCTGACTCC  
TCAAGCATTTTTTTTTTTTTTTTTTTTTTTTTTTTGGCTTCCAAGACCCAAACGCATGTCTCTCTTCTTGG  
CACACTCTTCCCACTTTTTTCTGCTTAATGTCTAGTTATTTAGTTTGAATTAATGTCACTCCCTCG  
GCCTTGGCGCGGTGTGCTGTGTTTATTTCCAGCACTTTTCGGACGCGGAGGAGGTGATCAGGAGGTCA  
AGAGATCGAGACCATCTGGCCAACATGGTGAACCCCGTCTCTATTAATAAATACAAAAAATTTAGCCA  
GGCGTGGTGGCATGTGCTGAAGTCCCAGTTACTCGGGAGGCTGAGGCAGGGGAATTGCTTGAGGAGGAT  
ATTGCAGTGAGCTGGATCGCACCTCTGCACTCCAGCCTGGAGACAAAGTGTGACACCATCTCAAAAAA  
AAAAAATAAAGAAAGTCACTCACTGACAGAGGGCTTCTCAGATACCTCCCTGCCCCCTCATTTAAGTTGC  
ACCGCTTGTGTTATTTCTTTATAAGCCCCATTCTTTTTCTTCTTGGCATTTGATCAAAATTAACAGCTTTAT  
TTTATTTTAGCATTTGTGAGTGTATATGTGTGTTAATGTCTGCTTCTGACTAACTGTACCTGACAGGA  
AGGCAAACTGTGCTGTGTTGCTCATTGTTAAACCTTCAGCACTGAACCTCAGTGCCTCGAACATAGGAG  
ATTCCAATCAATATTTTACTGCGTGAAGGAATGAATGAATCTTTATGTCCTCGTGCCTAACATAAAGTC  
TGCCATATACAATGGACTAAAAATAGTATTACGCTAAAACAGGTTACGGAGAGATGAAGTATTAATT  
GTATTTTTTACAGAGAAACATGGTCAGTGTATCAAAAATAGAGACCTGCTCTCAGATATATAACATAG  
AACTCTCTTCATTTCATTGCTTTCATTTTAGTTAAACAGAACTGTTCATCTAAGTAGAGCAGAGAAAAAC  
TTCATAATTTGCTGTGCTGTGTTTATTCCAAACATTTAAACAAAAGGTGAATAAAGTGAAGTATTTCTTCCC  
TGTGGTACATACTTGTATGTGGGCATTTTAAAGATTGATCAAAATCTCCTTTCAGCTGGATATTTGAGTAG  
GCACAACCATACAGAATTTTCTCTAGGACTTACTTTAGCTCTTAAACTATGTAACTGAACAAGCAA  
ACTCAAGTGGATCATTATCTATAGAAGTATAGAATCCATCTCCCTTTGGCAAACCATTTCAAAACCCAGAA  
GTGTGTTTTTACACATTTCTGACAGAGCATCTGTAATAACCAACTCTAACCTCTTTCTTACCATTTAGC  
ACCCAAAAGTATAAGAAAAGAGGACATGTTAAGGCTTGTCTATTTATTAGAAAATATATAAAGAGTTCT  
TGGCTTAAGAACTCTTCTGGCTATCAGCTCCCTGATGTGAAAAAGTAAATAGCAAGGGGTAGCATGGAG  
TCTTACTCCCGTGTGACAGACAGCTTAAGAAAGACAATTGGACATCATGTGACTACATGATTCAAGCTAA  
AGTCCAGACACATCTTTTCCATAGGCCAATTGAACATTTTCTCTGTAATTTCCACAATAACCATTTGAC  
CAGCATGAATGGAGAGGCTGTGAGTTCTTCTGGGTGAGTAAAGGGTGTGTGAGTTATCTGTCTCTGTCA  
CCAGGATTTAGAGGAGGCTCATAGTACTCTTGTAAAGTTGAGGTTGCGCTGTGGAGGCTGCAAAAAAG  
AGGGAGGAAGAGAGAGTGAAGTTCTTCTGGCTGTGTCAGGAGGATGTGATTAGAGGACCTGGGAGGGC  
CTTCTACCTACGAGGGGTTGAAGTGGAAATGGATGTGTGTGATGACCTGGTAACGTGTACAGCCCTT  
TCCACCCCATAGTAGTCAGGATTTAATGCCTCAACAAGGCAGGTCTCTGAAGGAGACTGACTTTTCTCT  
CTCTCTCTGAATGATGCTGCTGAGAGAAATCTCACTTCTCTGCTTTGTTTTCAACAAGTATGGACTTCC  
TTACACAAAAAGAACTCTTTTTGCTTTTTGTCCCCCATTTCACTGGAAATCTATCCACTGGGCACCACTG  
TTGGTTGGCTTCCCTTCTATAGATTCCCTTATGTTTCAATTTTAAAGACAAATAAGCAACAAAGTGA  
AATATGGATTTAAGCTAGGAAAAGCAGAGAACTGAACTTTTTTCTGCAATCATACTTCCAGCTTCTT  
CAGCAAGATCTGCTTGGCTGGGAACATGCCTTCTGAGAACTTTACATTTCTAAACTGCTGCTAAATGCT  
CCATGCAATTTATCTCAAACTCTCAGGGAAGATAGCACTGGCTTTCAGTCTCATACCAACCATTTCTAA  
GGTAATGGACCAAAAGTCATTTCCACTTGAAATATAATCTTCTAAATGAATCATGCAACATGGTTTTTA

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CCTCCATTTTTCTCAGAATAACTCTAAGATGATGATCCTCTGGCCATATTTTTAAAAATTTCTCTTATTGT  
 TTTAATTTCTTCCATTTTTCTTTAATTTGTATCCAGACACTGCCCTTCTCTAAGAGGAATGACATTTT  
 TGCGGGTTATCATGATATATTTTTAGCCCATTTGCCCTTGACCCATAGCTTACAACAGTTAAAGAACTA  
 ACATATAACATAGAGTTTTGCCCAAGGCCATTAGCTTTGCATGTTAACAAGTGGGCAGAAGGAAGGCTG  
 GGCATGAGAGAGACATGCTGCTTCTGGTGAGATCATCAATCCCATTTCTTGAACCTTCAGATCATTTGC  
 ATTTGTTTCAAGATCGTCTGCAGAGGAAACATCTCAAAGTTGGGAGGTTGTTGAAGAGTCAGAAACAAAT  
 GGGTCTGGGTAATTTTCAAAACAGGCTTTTGTCAATTGTCAAGTCAGCTGTTAATATTGTCAATTGT  
 CACTCAGCTGTTAATATTGTGCTTTGTTATAAGGATAGGCACTGTGGTCTCAGCGTTCTTAAGCTTTTA  
 CATTTCCGTTATTTGGTTTTACTTCTGCATTAGTAGAGTAGATGTAGAGTAGATGCCACCTCTAGGAAC  
 CTACCAGCAGCAGCATCTTAGACTAGAAGCTCCCTCTCTAGGACTATAATCTCTGTAGCCTCCACTTCTC  
 CCACCCCTTATTTCTCTGAGCCTACTTGGTCTTTGATACTTACTATAATACTTTCTATTCTCTTATCAT  
 AAACAGTTTTCTGATTTCAATTTCTCTGGTTTCATACATAAGCCCCATAATCAGTCAGTCAAGATTACC  
 TTCTAGAATTTCTGTGCCCTCAAGTTTTCTCCATATCTAGAGAGTCAGTCATCTGCCCTTGAGCCACATCC  
 ACTGTCTACTTTCTTCACTTCCATCCCCAGGCTGCCAGCACTGATGAAAACAAAACAAAACAAAACAG  
 CAAACAAAACAAAACAAAACAAAACAGTACTAGGATCTCAATCTGGTTTGCAAATCCATGCTTCTTTCTT  
 GACTTCTTTAGACATCAACAGAATTGACGCTCCTCTTGACCTGGGACACCCCTCCTCCTTGGTGCTTTC  
 TTCTACTCCCCCTGCTTCTCTGTATGCTTTTGAGGCTCATCTTTCTCTTAGGCTGTCTTCCCCCATC  
 TCTCCTCTCCTCTGTGCACTCAGGCAGTCTCCTTGTCAACCCCCAAAACGCTTCTCCAGACCCAGT  
 GTTTCTCTGAGCTCCAGGTCCACAATTTCTTAAGGTCCATGTGGATGTCCCTCACCATTTCAAACTTCTC  
 TTCCACAGGGAGTCCCTGGTTTTCACTACCATAGCATATTTAAATACCATGCATTTCCCTTCATACCACT  
 AATTACAACCTTGTTTCTTTTTTAAATTTTATGTTTTTAAATATATCTTCTGCCACATATATTGTAA  
 GCTCCTTTTGAGAAAGACATTTGCTGTCTGGTCATTACTATATTCTTATCAACTAGCAGGGGCCGTGG  
 TCGGGCTTGTGTTAGTCTTCTTCTGCTATAAAGGAATACCTGATGCCAGGTAATTTATAAGAAA  
 ATAGGTTTTATTTGGCTGAGGGTTTTGCAAACGTACAAGAAGCATGGCGCCAGCATCTACTTCTGGTGA  
 GGCCTGAAGCAGCTTTTACTCATGTGGAGGCAAGAGAGAGCAGGCTTTTACACAGCAAGGAGAGAGA  
 GCAAGAGAGATGCCAGGCTCCTTAAACGACCTGCTCTCCATAAACTGAAAGAGCAAGAACTCACTCATT  
 ACGGTAGGATGGCAAGCAGACAGCAGCGGGCAAGTGTGAGGATCCACCCGAACACCTCCCACTGCCCCACCTCAA  
 CACTGGGATCAAATTTCAATGTGAGATTGGAGGGAACACACATCTACCCCTTTATCAGTGCTCAATAAGC  
 TCGCTGAATGTAGAAGCAGTATATAAGGCAGGGGTGGGCCAAGTATAGGCGACAGGACAAATTTGGCCTG  
 CTACTGCTTTGTAAATAAAGTTTTATTTATTTACAAAATAAATAAATAAATACAGTCATAATCATTTGGT  
 TACATTTTGTCAAAGCTGCTTTTGCATTAAACATCAGAGTTGAGTAGCTGCCACAGAGACTGTAATGG  
 CCCCACAAAGCCTAAATAGTTACCCCGTGGTCTTTTACAGAAAAGTCTGATATAAAGGACAGTCTCAC  
 AGCACAGAGGAAAAGCATATAACCCAAAGGAGGAAAGAGTAGAGCATAGTGGACTGCAGAGAAGTTTCCC  
 TGGACCCCAATCTGTGCCCTGAAAGATGAGAAGGACACCTCCAAGGCAGGATGGGGGTGAGGTGGGGTGG  
 GCGGTGGTGATGCCAGACAGCAGCAGCGGGCAAGTGTCTGGAACACTGCCCTTTGTTCAAGTATCTCTG  
 CAGTATAAATGCAAGGTGGGCAGTAAGAAATGGACTTGAAGAGATTGAACAAGGGCCAGAAACCCAAAGG  
 ACATTGCTAAGGAGTTTGTGCTTAGCCCATCCAGGGCCCTAGCAGCCTTGACTGATGCTTCTGAGGTCC  
 TGGAGGCTCCAGGCTCAGGCTACCTTCCCATATTTCTCTGAAAATAATATCACATTTGTTTAGTAAAAAAA  
 TTGTTTCTTAAATAAATTAACCTCTCAGAAATTTGCAATTACATTTATTTCTTCTCATATCCTCGAGTTA  
 GAAAAAGGTATTTCTCTCTGTGATGATATTGATTCTGCACTCATCTATTTTCATTACTGTCTCCTTCCC  
 TCCCTCCCTCAGTCCCTCCCTTAGTCTATCTCACTCTACCATCTTTTCCCTTGAGACCTTCTGACATTCAA  
 CATCTTGGTGCCTCTATCCAGCCACACCTCTGACCATTCACCATTTGTCTCTTGTATTGGTTCCACCT  
 TGTCTTATCAGCTGATGCTGTCTGCCAAATTTGCTCCCTCCTCTGCCAGTTCTCGCCCTTCTCCTC  
 TTCTGTCTCTCCCTCTCTCTTTCAATCTTTCTCTCCTCAGTCTCTCTTTCTCTTTCCCTCTCTCTCAAT  
 CTTTCTCTCTCAGTCTCTCTCCATTCTCTTTCTCTTCTCTCAATCTCTCTCTTCTCTCTCTCTTA  
 TCCTCTCTTTCTCTCAATCCCTCTCTCCCTCTTTCTCTCTCTCAATCTGTTTCTCTGTTAATCTCTCTTT  
 CTCTCTCTCTCTTCT  
 TTGCTTTCCAGTTTTCAGTGATTTCTATTTCAGATATCTCCAAATTTGTATTTCCGGATATTTTATGCTT  
 TCATGGAGGCGGTGTAATTTGATATAACCTTTTGGAAAGCGTTTGGCAATACCTTAGTAAAAGGTTAAA  
 TGTTTACACCCCTTGATTCTGCTATTGTATGTGTAAGGATTTTTCTCTGCATACTTTTGTAAAGTGTAGAA  
 AATATATGTATAGGAATAATTGCACATTTGTTGTGATGCTGAAAATTACAAATAATAATAAATGCCTATA  
 ATCAGAGCAGTTAAATACATATGAACACAGTGAATACCAGGCACTCATTTAAAGATGAGGTATATTTT  
 AACAAGCCTATTTGAAAAGATACCAATCTTAGCAAGTGAAAAAAAACATCAATTTGATATATTTAG  
 CGCTGTCCCTCTCTCAAGTTTCAGACCCACATTTTCAATTTTCTGTTGTCTCTTGAATTTAGTCTCTGTA  
 AATTTTAAACTAATCATTTTAAAGGAAGATATTTTCTCCCTTAAAGATGAAATTCAGACAAACCTCTG  
 AATTTCCCTCTTTCTGCTAATTTCTTGCTTTCTTTTATCATCTTTCCATCCATCCATAACATACAGTTCCA  
 GAGGAGTCTTTAAATCCTTCCCTTATTGCCTAACACCGAGGATCATTTGCTGAAATCTTGTGATTTTCC  
 CTCAGATCAACAAAGGATTTTCAGAATAGCCCTGATTTCTTTATCACCACGGTGCTGTCTCAGCTCTT  
 CTCTCCCTCTCTCTTACTGCTGCTCTCTCCAGACTCGTCTCTCTCTCCCAATCTCTTTGCGCACTGA  
 TGCCAAATTAGTCACAACAAAAGTGTTTACGTGATCGTGTACCCCACTGGTAAGCTCTTAATGGTCTTCC  
 CTTACACATTATCTCCCATTTTCATCTCAGGAGCCTTTTATTAACCACTCTTCAGAGTCTGACTCAGCCCT  
 CTTTGGCAGTTTCTCTCTTTACAAATAGCAAAGTCTATGAGCTAGATTACTCAATATTTCCCTGAATAGGT  
 CTCTCTCTCTCCACCTTTTGGCCTTTCCAGTACCATTCAATCTTCCCTGGAATTTCCGAAATTTCTTTC  
 CTCCTCACTCAGTCAATGTTTTGAGACCCACATCAATGCTACATACTATTTGTTCTTTACTGATCATG  
 CCAGTTGGAATGATTCGAATCTGTAAAGCAGGGTGTATGGAATGACATTTCTTATAGCCCTTTGGTCA  
 TTTGGGAGCAATGTCTAACATAATATCCTCCAGGTCCATCCATGTTGTTGCAAGCGACAGGATTTCTCTC  
 TTGTTAAAGGTGAGTAGCATTTTCTACATATATTCCATATTTTATTTTTTTTGTCTCATCTGTTGA  
 TGGTCACCCAGGTTGATTTCCATATCTTGGCTATTGTGAATAATGCTACAGTGAACCTTGGGAGTGCAGATA  
 TCTCTTCAACATATTTGATTTCACTCTCTTTGGATATATACCCAGTAGTGGGATTATTGGATCAATGGTA  
 ATTATATTTCAATTTTGGGCAGGGTCTCTGTAGTAGCTCCATAATGGTTGTAGTAATTTACATATCCA  
 ACCAAGCAGCCAGGGTTCACTTTTCTCATGTCTCGCCGACAAGCCTGATATTTCTATTGCTCTTA

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GCGCTTCAGCCTTTCCCTCGTGACTTAACGGTGACTCCCTTGAGACTACTTGAATAATAAGTTTGGATG  
 GCAAGGAAATACCCCTTCTGCTGTACCCCTTGCCATAAGACTGAGTTACTTTGTAAACAAAGAGATTTA  
 CTTGGTCTTCCATGCCCAAGACCCCTTTACTTTTCATCGCTTAATATTTTCATGGCCAAAACTGTTGGTT  
 CTTCCAATCTTGTAAAGGCCATTATCTTTGATCTTGTCTCCATTCCCTTCCATTTTGTCTGAGAATCATT  
 CAGTTCTTGGCTGATCTCACGTCCTTCTCGCAACACCTTACTAATGACTGCCAGAGTGTCCACTACACAC  
 TATCGGTCTCATTTGACCCTTCCCAGGCATGTAGCCTACCTGCCAAGTTCTTTCACAGCAGATATTTT  
 GCAGTGTGTAAAGAGGGCTCCCTAGCTTGTATGTTTTCTTACTACCTGGCATTAGGAAGTAAACATTTT  
 TCATGGCAGTATTCATTCTAGTACCAATTTCTTTTAAATCTACATGGGCTAACTGCTGTATCAAACAG  
 CCATCAAATCCCAATGTTAATTGCAACTTACAGTACGTTGTATGTTTTCTGTCTGTATACTCATTCAGAC  
 ACACAGAGTTTAAAGTAATTTGTTCAAGATCACAAAGTTAGTAAATGGTGGCATCAAGATTGAACCCAGG  
 CAGCTGGACTCAAGAGTCTAAACAACCTTTTCAATTTTAAATTTTCATCTTCAAGATATATCACTTACAAT  
 TTCCATCTTCACTACCTTCTCCATACTTACAGAGTGCATATGTAAACCTCTTGATCATATAAATATTTA  
 TGGAGTCTCAGCATTTTGAGCACATGCTGAGAGATTTGTAGCATTGAAGATAAAGAGCTCTTTCAATA  
 CATCTAATCTTGGCACTATTGATTTTGAACAGCATCTTAATTTGTTACCTTTTAAACCATATTGTACT  
 TTTCTTCAGGACAGCTAAATTAATGTCCTTATGTTGATCCCTGGGTTTTCTCAGTTTCCATTATCAGT  
 TTCCTTTTATATAAAGAGATGCTAATGGGTAACCTTACATTTTGAAGGCATATTTTGAAGATATACAA  
 GTGAAGTTTGTATCTGTACACCTCGTTAGAGCTCTTATTTTACATGTGGAGGAAGAGATGCCTTAGGG  
 CTCTGAAACAGGCTTTTATTTTATAGAGGAGAACTTCCAGAACATGCCATGAGCAAATGCTCTGT  
 CAAGTCTGGTTCTTTCCCCCATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT  
 AGGCTCCCCACAAGGGGATTTGAGGTGCTCTGAAACACAGACTGACATAATCCATGGAGGAGTTCATCA  
 CTGCAGGCTGTACGCTCTACAGTGGGAGTCATAGGCTGGTCTGCTTGATAAACTACTCTGTATCTATGA  
 CTGGAGCTGTGCTTCTTTAAAAATAAATCTTGTTTTCCATGCCCCACGTCCTTCTCAGCCTCAGGA  
 GCACCTCATGAGTTTACAGTAACTTGTCTTTTACAGTCATGTTACTTCCAGATTCTTAGGAATCACCCC  
 ATTTCTGATGCCGTTGATCCATCCATACCCACTGAAATGAGCTAAATGCTCTAGTCTGATTGCCCCCTT  
 GAAGTTAGTATAGAATATTTTGGCTAGACTTTGAAATGAAGCCTTGACCACATGCATAATGACCTCAG  
 TAGACTGAGAGGTTCTTTGCATCAGGCAAGTGACAAGTATCTATCTCATCTTCAAAGTCCACATAGA  
 TATGTGCCAGATTGTAGGTTGACCAATCACTTTTCTACAGTCTCAGTGGCAAGCCTTTTCACTTTGTAA  
 TAATGCTAGTGAGAGACCCATAGGTACCACATAATTTGGCCAGTCAATTGAGATTCAAGCAACATTTGGATA  
 ATTTAGCAAACTATCATCAGAATCATCAAAGTACATAATTTTATTTATATGCAAAATAGTGGATTAC  
 TAAAGTGCTTAGACCAATTAAGTTGCTCCCATTTGAAACAGGGTGATTTTATCTTAAGAAATATATCAG  
 GATAAATCTTGTGATGCTCTTAAACAGTACTGCTTAGAAAAGTGACAGTTCAGTGCATTGCATATCCCC  
 CAGAAGCCCTCAAAGTTCAGATGTACACCACAAAAACATGAAGCACATGTGTTGATGGAAGGTAGGCT  
 CTGGGGTCTTCTATCATATATGCTATGATTAATAGTCAACATATGCCCTCCACATTCCTTAAAGG  
 AACATACACATGCATACACACACACACACACACACACACACACACACAGTGAAGTGAATGAGAG  
 TTTGGGCTATACACCATCCCTGAGGGACAGTCTACAGTCCCTAATGTGTGCTGTAGAGCAAGCATTATA  
 TTGTTGACAGGTAATAATCTCTGTTAGGAATAACAGGATACCAGTGAGAAGAGGCTGAGAAAAATACAC  
 TCTTGTCTGGAAGAGTCAAGAACGAGCTCTTCTGTTGGGAACTATGGGAGACGATTGAAAAAGGACAAGAAG  
 AAAGGAGAATTGTTAAGTCTCCACTTTCTCAGTTTCTGAACTGAACTTTTGTCTCACAGCAGGTGAACACA  
 GGCTCCCTCCCATCTGAGCTTCTCTCCCTGCGGTGTCAGTCTGTTAAGTAAACAGAGACGTTATAC  
 TGAGAAAGGAACATTTCTCTATTTTGGCTATGAGTTGTTATTTTAAAGATTCTCTCCAAACATTTTC  
 CCTATCTCTGTTTATTTTCTACTAGAAAGAAGATGAAGTCTTAAAAAAAATTAAGTCCATGACA  
 AGAAAAACCCACTTCTAGTATGTTCTCCCACTCAATGCCAATGGAGCCTTTGGTGTGAGCACTCTGCCA  
 GCCACACATTTGGGACGATACCTCTTGAATTTCTGCTGTGCTTCTATAGAGTTCCTATGCATCCAGATT  
 TTCAAAGTCAAAGCAAAATGCGCATGCGAGTTTTTTCTGACTCCTTCAAGTTAAAGGCCAACCTCTCC  
 CTTGACATATCCATGATTTTATCAGTATATCTATAGGTAATCTTAAAGGTGATCCTTACTGTGTGCCAC  
 ACTCCATTCTAAGCACTTTACATAAAAAACCTCATTTTCACTTTTATTTGGGAATAGGATGACAAATTTCTT  
 AATATTGAGATGGGTTGAATCTGAGGAGACTGATGTTAGATGCAAAAAGCTTTCTTTCTAGAACTTTTCC  
 TGTGTCTTGACCTGGCTTTCTCCCTGTCTTGTCTCCATTCTAGATCTCTTTACTGACAGTGCCCATGGC  
 TTTCTTCTTGGTACTCTAGTGTGAGCATAAGAACTAGTATGTAATAGGCTCTCAGTAAATCTTGTGAA  
 TGAATTAAAGTAGAGCAAGAATTAAGACAGAGAAGAAGATCTTCTGTTGGAGTTCTTTCTTTTGGTTG  
 ATAAGCAATGTTGATGAGCTAACAATCTTGAGTCTAATCCCTCATTTGGAAAATGGAAATAAATG  
 CTAATCTTAGAGGTCACTTCTAAGAAGTATATGAATATATCAGAAGTAATCAACATTTTAAAGTCAAAGA  
 AAAGAAGCTCTGTGAAAAAGAACTAATGAGCTAGTTGAAAAAATATTAATTGGATCTTTTCTCATAC  
 CTTACGCCAAAAATAATCCCCAAAAATGGTTGCACAACATTGTGAATATACTGAAATCCATTGAATCACA  
 CTCTTTAAATGGGCAAAATGTTATGTTATGTTATCTTTCAATAAAATTTGTTATAAAATGAATAAACC  
 CCAGAAGATCAAAAAATTAACATAAAAGCATGGAAGTATACTAGAAGGAAATATAAGATAATTTTATAT  
 GTTATGTTGATATATTTATATGTAATTTTATTTATTTTCTTTGCTTTTAAAGCAAGACATAA  
 TGTTCTAGAGGAATAAATGAACGTTTCGATAAATTTAATTTCTCTATTAATGTTTTGCAGAAGAAAAATAC  
 CAGGAACAACATCAGAAAGAAAAACAAAAACCATAAGAAAAACAATTAAAAATACATATGACAAATGGC  
 TTATTACTATAATTTTAAAGAACTCTTAAAAATCTATGTGAAATGACAAATAACAGAAAAATACGTGC  
 AAAGGACAAGAGCAGGCTTAGAGAAAGCCTATACCAATATATCTCTTATCAACAGTCTATTGTACA  
 AGCTATTTGAAAGCAATGTTTGAATATCAAAATTTAAATACATAAGCCCTTTTATCTAGCAATTTCTAC  
 TTCCAAGATTTATTTATAGCTATCTGTACACATATCCAAAGACATAAAGGATAGTCATTGAAT  
 GAAATGTTTTTAAACAACAAATACTTGAAGCAAGAAATGTCAACCAAGAAAGAGTGATTGAAGAAAG  
 TTTAGCATTCAGTTCAAGTGAAGACATATTGAGCTGTCAAAAAAGTTGATGGAGAACTCCAAGGTCTATT  
 AACTAAAAACAAAACAGGTGCTAAACAATATGTTTAGTGTTCATATTTTAAATGTTTATATATTTTCA  
 AATATATATTTGTGTCATGACAGAAAAATTTTAACTTCTTCTAACCCTGCAACACATCATGCCAAAT  
 TCACTTGTGATAAAGAAAAAATAAATGAATTTCTTCTGTGTAGTATCTCATTTAAATTTCTTCAACA  
 ACCCAATAAAAAAGATACAGACACATGTTTAAAGTACATGTTATGCACCTTTGGTTTGTCTATTTA  
 ATAGTTGCAACTACTAATGTTAAATTTCTGATGCCAAGGTTAAAGGCTGAATCTTAAAAATATCAAGA  
 TCTGACATTTTCTGTCTTTCACAGATTAATCTGCCATCTCCTGACCTCCAACACACTGCTCTATGTTCTT

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TCATGCTGCTCCTCCTCCCATGTTTATAGGACCCCTCTTCCAAGGAGGCATTACATCTCTGCTTGATGAAAC  
CCTACATTATCTTAAAGCGTCCACTCGAATGCCACCTACTTATATACCATCTCCTGCAATACCAATGGGC  
TCAGCCCAACCATAGCCCATAGTTATTGTAGTTGTTCTTGTACTTCAAAGCACTACAAAACACAACCAT  
CAGGACTTGTACATTATTTGAAGGCTATGAGCATCTTCAGCCGAGGCCCTGTTTTATCCCAGAACTA  
CCACATTGTTTGAATATAGTAGCAGATCAATATACGTGTATTAGATAAATCGTTTACCAGATCTTGAT  
CATTTCATATTACCATAGGTTGAAGAACTCCATATTTAACATGGCAGACTTGAGGACTGAACTACCTAC  
CTCTTCTAAGAAGTTGAAATGAGAATGTTTTATTGATGGGAAATTTTTTTTTGTTTTGCTTCTAGAAAT  
TCAAATGAATGTTCAATATCCATGAAGACAATGGCTGATAGTTTTTTGTTAAAGATTTAGAACCAGTGGGA  
TTTTTATGAATGTGAACCCCTTCATGTCTTGTGGAAGATTTTCTGTTTTTAACTCTTTTATTATTAT  
TTATTTTGTCTATGTTTTTCATAGGAACCCAGGAAAATGTGTAGAGGGCATGGTGGAGATCTTCGACATGC  
TGCTGGCTACATCATCTCGGTTCCGCATGATGAATCTGCAGGGAGAGGAGTTTGTGTGCTCAAATCTAT  
TATTTTGTCTTAATTCTGGTGAGTTGATAACACAAGATAACTCAATGCTGGATGAAATGTTTATTGTAGT  
TTTCAACCAGATACGATCTACCCACTCCAAGGCATAATGTCTATAAATAGAAAGAACTACTGACACACA  
TTTTAAAATAACCTACCAACATTGCAGATTCTTTATAAAGGTAGAACCATGCTAGCCAAATAGACACATG  
AAAAATTGTAATTTGGCATTGAATCAAATGGCCCTTGAGCTAAAATTTTTGTATGCTTTCACAGATAGGA  
TGTTTTTATTCAAATGGTACATGTATATAGACATATGTTAGTTGATAGTTATATTATGTCTGAAAATAAG  
TAGACCAAGTAATTCGTTAAGAAATGTGACCAATTCAGGCTCCAGATAGTAAAGAAAGAGGGTTATT  
TGAGACAGACCATGTTTCTGGTCAAACCTGACTAGCTAAAAATATAGTTGGCTTAGAGATAGAAAAACCT  
GTTTCTAAAACAGAAGATGTGGAATGCAATAAATGTCCAGCTGAAAGAACATTTTCCATTGCTCTAT  
GAAGTCTGATTCTACTGCCCTTCGTATTTATTGTTTGGAAAGCTTAGCTAAGAGCAACATCTGTTTT  
TTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTTCAATGTAGTGAGGCTGGCTGTTGTATAAAGAGTT  
ACTCTATGTCACCAAGATGGAACCTATGGTTGAGCCTGAATAGTGCCCTGACTCCTCCTAGCCTCTTGG  
TATTTGGATCTAAGTCTAGCTCTACAGCCTCTGGGACCTAAAGCTCACATTTGGGTATCAGCGGTACAGC  
AGCTCCCCTTAAGCTCCACCTTTCCCCCTGGCTCTAACCCACTTTGTGCTCATCCCTCATTCTCACAT  
AGAAATCATAGCTATTTGCAATCTCTGGGCTGACTTAGTTTCTTATGCCATTAGACATAGTCTCAAAT  
CCTCAATAGCTGAATTCGAGCTTGATTGATCACATACATAGAGAATCCGCACTTCTCTCTTCCACG  
TGTTTTTGTCTCTTTCTGATGAGTGCTGATCCCTTCCCGCTTCCCGCTTCCCGCTTCCCGCTTCCCGCT  
CACCCTGCTAGGAACCTGTGTTGCTTAATGGAATCAGCCCTTCCTTCTCTTTCTTGTGTTTTGTTCTC  
TTTCTGATGAATGCCAATCCCTTCCACCTCCCATGACAATTTCCACTTCTCTTCCCAACCACTAG  
TAACCTGTGTTGCCATTAAGGTTATCACAGTAATCATTCTCACTTATCAACTAATAAATGGAATCTGTAC  
TATTACACTAGGCAAGGCTGAATTCAGAAATGAAATGCCATGATAAATGATGTGATCCACACTAAGGAA  
GTGATTACCCTCCATTGAGTTTCTGTTTCCACTCACGTGCATTGTGCTTTTCATTTTCAGTCGTTTTGTC  
CTGTACATTGTAGGGTCCAGATCCCAATGGCTCTTTATTGGATGAGAGTTCTGGGAGCAGTGCCACTC  
AGCTACATGGTGCCAGGTCCTGAACCTGTGCTTCTTTGGTGGAGGGCTGGCAGCTGCTGACAGCTTTCA  
TGTGGCAATCTGGGAACCTTCAGAGAAGGCAGGCTATTAAGTGTTAAGACTCCCAACCCGAACTTTTA  
CTGAGAAAAAGTACCCAGACAGGAAGTAAATTAGCCAGAGTTGTATGATCCACACAGTGGATGCTCTG  
ATCTCAGTAATAAAAAATATTTCTCCAGATCCATATAGACTTTCTCTGCATTATTGTTTTGTTCTGTT  
CCTATGGCAGAGTGAGTTTTTAAACTATTATGCAAGAAATATCAGGATTTTTGCCACCAAAAGTTGGA  
TTCTAGACCCAGGTTTTTACAAACCCAGGGGAAAAAACTTTGAGCCCTCACAAGAAAGTATTTATTA  
AAGACTGGCACCACCAACCTCAAGACTATATTTCTCACTGCAGGATTTGGCCCTGTCTGCTCCTTCTCA  
GACTAGTTAAACTTTTCATCTCCATCCTTGTCTCTTCTTCTTCTTAGGATCTTCTGTGCACTTCTTT  
CTTAGGATCTTCTTGGCACTTCTTGTCTTGAAGGGCAGAAACGCTATTGTAGAAATTCAGGCACTGT  
ATGCTGATGTTTCTTATAGTTTGTCTTTTTCATGAGATAACACAGCGGCTGGCAGCTCCTCTTTCTATCA  
AGGACAGTACTGCTGGCTCAGGAGAGCAGTAAGCAAACAGAAGCTGTCTCTCAACCTGTACAAAGCGAA  
ACCACTCTTTTCCCTACAAAGTGAGCTGTGCCCCAGAAAAGCGGATCTGCTGCTGAGCAGGCTCCTCA  
TGCTCCTATTGTTCTGAAAAACAGCATCAAAGAGGGCAAGACTGACACACAATGTTGTAGCATTAGGA  
GCCTTTTTCAGAAATAAAAAAGCAATCAGTCATATGAAGCATGTGGTATACCAATCAACAATTTTCT  
CCACAACCTGGAGATATGGATTTTCTAAAAGTCCAACCTGATTTCATGGCCCTGATACGGGGCAGCTTACC  
TCTCATGAGACCAATGACCAAGTGACTCTGACTCCAGGAATCTCTGACAGAAGCCAAGCTGGAACGGCT  
CAGGAAACCTGAGCTAGAAGATGCCCTTCTGACACCTGGGAAACAAACCTCAGTGTATGGAGGAACCCA  
AGGTTTTGTTTGGCCCAAGTCGCCAAGGCTGAGGAGGCTGGGTTATATTGGCCCGATTTTGTGGC  
CGAGGCACAAGGGGAATTGAAAGGTTGTTGTGAGGACCTGCTCGGAATGTCTTCTGGAAGTTTGGAGAG  
GGTCTCTCAAATGCCAAATTTCCATGGGAAGCCATTTTCACAGCTGCTTGGGAGTGGGAGATATTCGTC  
ATCATTCTGCCCCATTTAGAATAATTTATTACTTTGCTTGCAAAACCCGGAATCATCCATAGGACACA  
CGTTGTTTTGTTTTTCCACTCCACACCAAGGACAGAGCATTCTGTTTAACTCAAGATGCCAACTTCAA  
GACATTCTGAGAACTAGCTGGACAGAGCTGAAGTGAGGGCAATCAGAACAGAAGTGATGGGCCAGGG  
CAAAAGCCCGTGAAGCAGCAGCTGCGGAGGAAGGATGGGAGCTGGAGCTGCAAGGGGGCCATGGTGGAG  
ACTCTGGGCTGCCACAGTATCCCTCTGCCCAATGGGAATTCAGTTTTCTGCTATATCATTCAATTAT  
TTCTCATTTTTCTAGGCTAGCTCACCTTATTTCGGGAAGTTTTCGCACTACCCAGTCCATAATGAATTT  
CCTCTCTAGACTATTTCAATTTCTACAGTCACTACCACAGTCTAGGATTTGGTTAGTTGGTTGATTTT  
ATTCAATTTATTCAATAATCAATGTTTATTGAGTCTCTACTATGGACTTTGTGCCAGGTATACAAAACCTG  
AATGTTACTGTTGTGTTGGGTTTTTTCTTTCATTTTAAAGTTAACCTGGATTTTCTCTCACTCTTT  
ATGATGATTTTCTCAATCTCCCTATAAATTTTGTATTTTGGATTCTCTACAGTCTATTTAGGCT  
GTGGACTGTCAACAGATGTTACATCATTCACTGATTTAATAGATGCTTATTGCTAGACATGGCCAGGAG  
GACCTGGAAGTCTCATTTTTTCCATCTGTTCTTACCATTCTGAAATGTATCATGCTCTTCACTGCTCC  
ACAGATCTAGATGATATCAAATTTAAATGGAAGGCAAGACCCATCTCCTTGGGTTATTGTGGATAA  
GGGGGAATTTGTAGGAAGTGCTATTGCAAGTTTCATGGACATTGTAGGCCCTTAGTCAACAACAGCTA  
TCATCATCACTGATGAGAATCTCTGGCTTAAACGGAGTAGGTTTCATGCCCTTTTTTCAGTGTAATGAAGT  
TTTTAGTTTAAAGGCCTTAGCAAGGCTTACAATAAAAAAAGTGGGACTCCAGGGTAACACCAACAAT  
AGAGACGACCATGGCTGTTATCTGAGACTATTAATTTATGCCACGTAATTAGATTTAGAGAAAACCTAGA  
GCAACATTATCTTGTGGATAATAATTGATTGTGATTGGGACTTACCGTTGAGAGACCTGATGAAAAC

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CTATGGTGAATTGCTGTGGAGTCACATGGGTTTCATGCATCATTATCATCAGTGGGCCCTGGTTTTCAGCCTCA  
 TAACCCCTGAGAAATCCACCTCTATCAGAAAAACCCCTTTTCAGTGAAAGTTCCTCAAGGCTCAGAAAAAT  
 TCATATGTCAAAGCTTTATATGTAAAAACCTATACTCTCTAATAAATGTTTGGTTTGGCTTCACATTCA  
 ATTTAATAATTATTTCTACCTCTTTTCTAAACCGCTCTTAACACAGTTCTATATATTTAATTCTGAAGA  
 GCCTCATGCACCTCCCTCCCTGGTAACTTTATCTACTTCTCTCCCTGGAGAACCAGCCAGACCATGATTC  
 CAGCCCTCTGTCTCTCTTCAACCGTAGGTCTCTTTTCTCTCTGACTCTCAAACCTTCTCCAGTTA  
 CCCGGATGCCTTCTGTGTGCTGCTGGCTTCTGCATCACTGTTACAGGGCCACTGTTTCCCTGGAAATG  
 TCTTATGCTCTTGAAATGCTATAGCCTTGTTCACCTGTTTCATCCAAAACGATCCTCAGACAACATTTCT  
 CTTTCAATTGGTGGAATAATAAAGAGGAATATGGGTCAAATTCATAGACATTTAAATACCCAGGTGCA  
 AAGTTAAGAGAAAAACAGATAGGAGAAAGAAATATGGCAACATCTCTAAAATGTGTACTTTAGTGTTTAG  
 CAAAAAGGGACTATGGAATGTCAAACAGGAACATATATGTTAAACATAAACATGAAGCAGTGCCAGCTG  
 CTGTCTGCCATATAGTCATGCTTTGTTAATGTGGCACATCTTGCCATGATGGTGCCCTCATGAAACGAAG  
 GATGCTGAAGCAGATGCCATCTGTTTGTCTTGTATCAGAAGCCACTCTCTGGTCAAGGAAGTATTTGTTT  
 CATGCTTAATTATAACAAGTTCTCATCACAAGATTATTTCTTCTCCAGATCTGGATTGTTTGCACCTC  
 ACTTTATATTATAGACAATTACTCAGATTGTTTATGTTTATGTTTATAGAAATAAGACAGTGATTCAGA  
 GAGTCCCTGTATTTAGATGAAAGAACATTTTAAACATATTGACTGTAAACACTGAAATCATTAATTC  
 TCAACAGTTGAGGTTTCTGCAGGAGCGCCCTTGGAAATGTAAATGGGCACATTGTCAGGTATGCCC  
 ATTGTTGTACATTGGAGAAGATTGGATTCTGTTCTCTGAGAGTCTTTGTAATGCCAAGCTTCCTCTC  
 CAGGGAGCTGGCTTATTTGTCATTATTTGAGATAAATGGCACTTCATAGTATTAAAGTGTTCATTGTCTC  
 TTCTCTGGCTGACTGTATTCTGTAGGCAGCCACTCAACTTTGGAGCCTTTCTCTGCTACCAACTTTTGGT  
 GTTGCCTTAAGCAAGCCTCATGGCTCTCTGTAGTTTCTGACAACATGGTATAGCATGGACTTTGTCTATC  
 AGAGAGGACTGAATTTCAGGAGAAGCAACTCTGCCACTTCTTGGCGGAAGGGGGATGACTGATGTCTCTT  
 GATAAGCTTCTCCCTGAGCCTAATAAAGAAATAGAAATAATGATACTTAAACTCATGGAATTGTTGTGA  
 CAATTGAAAGAAATGACCAAGTTAGTAAAGCATCTTGCAACCATGACTAGCACACAGTAGATGCACATGAGTG  
 TTACTAAGCTTTAGTTATGCCCTCCAAATACAAAGCCTTAGTTTGTCTACTATGAAAGAAATTAATCTGT  
 TCTTCTTAGCAGGTAATAAATAAATCCCTGCCTGGAAATCTGCAGGAGAATTCACCCCTGCGCTTTCA  
 GGTAAAGATTGTCATTCCCATGATGAAGATGTTCTGTGAATAGAATCATCTCAAGTCCCAAAATGGTGTG  
 GATTTGCTCTGCATCTTGTGTCAGAGATTCTCTTGGAGCTTCTGAGAACTGGGGAACCAACAAAATGC  
 CTGTAGCCTGGGGAAAATGTAGGGAGTTTTCAGCATGAATTTGTGGGAGGTGAGAAAAGGCAGCAGGTGTC  
 GAAAGACGGGAAATCCTTGCCTGTTCTAGATGTTAGGAGCCATTTCCATTACATTTCAGCACCTCAGG  
 AGGAGAGCTGCCTAGCTTTGTCTCTCAAGAGAACCACAAAGGAGAATGCCATCTCCAGATACTC  
 AATTTGATTACCATTTTATCTACCTTCTCTAGGGTCCAGACATTATGTAATTTGGCATTAAAGTTTGAAT  
 AATGTATGGACCCAGTTTAAAGGAAAAATGCTTTGGGAGGCTGAGGCAGGTGCATTGCCTGAGGTGAG  
 GAGTTCCAGACCAGCCTGGCCAACACAGTGAAACCCCATCTCTACTAAAAATACAAAAAGTTAGCTGGGC  
 ACGGTGGCGGGACCTGTAAATCCAGCTACTCAGGAGGCTAATGCAGGAGAATCACTTGAACCTGGGAGG  
 CAGAGGTTGCAGTGACCAAGATCGTGCCATTGCCTCCAGCCTGGGTGATGAGAGCAAACTCCATCTC  
 AAAAAATTTTAAAAACAAAGGAAAAAATGCTCCCTGATTCCCGCAGTGCTGACTTAAATGTTCTTAG  
 TATGCCAATGTTGCTTAAATATGAATGACTGTAGCTTCTACTTAAATTTGGCAACCGCACCAAAATATAAAC  
 TGCAAAATGTTTATAGCTCTTATGGAGTATAAAGCAAAAACAAATCTTAAATTAATAACAACTAAGAG  
 GGAACCTGATAATAACAATGTTTGTGTAATTAAGTTGCTGTTTGAACATGCCTGGGGCAGACTCCTGG  
 CCTCTTTGCATCTGCATGAGAGGCTACCAAGGATGTGGCCACAACCTGGGCTCTCCAGCAGCTTGTCTGC  
 GCTCAGAACTGTGCCAAAACCTTTGCTCGCCAGTGTTCTGCAACGTCATCATTTGGATTGGCAGGAA  
 CACATCATTTGATCATTTTGTGCTTCTGCTTCTGATTAGTTAGATACCTTAAATTAAGTCTAGATTCTA  
 AGGCATTCTAAGCATCTGTGAAAAATGTGTTACTTAGGAAACAGTTTCAGGGTTCCATGGATTATCTAGA  
 TTGGTGAGTCTTAAGACTGACCACACAATTTCATCTGGGGGTGTGGAGGAGGGGAGCTTTGAGAAAAATCT  
 CTGTATGAGCACCCACACCCAGAGATTCTATGCAATTATCCAGAGTGGTGCCTTAATATCAACATTTG  
 TTTAAACCATCTCCCCAAGACTAAAATTTGTGACCGGGATTAGAACCATTTGACTTAATTGATGCAGAAC  
 ACTCTGATATTAATGTCTTCATGTCTTTTGAATGTCTTAAGACAAAAGCATAAAATTTTAAATCTT  
 AAAGACAATTTAAAGACCTATGAGAATCCATCTTAATCTCAGGAGCGTGTGGAACCTAGTTTGAAAC  
 TACTGGCATCGACAATTGAATTTCCACTAAAATAAAATAGCTCTCTAGTATATTACAAAACCTACCCATTC  
 TGCAAACTGCAGGGGAGCTACTGATCATGCTTGGAACTGTGCCAGGCATGCCTGCGTAAATAAGTAA  
 GGTCCACTTCTCCATGGACTGGGTGGGTAGGAGGCAAGATAAATTAACCAATTATTTTAATATTATGA  
 GTTCAGGGTTGTAATGAAAGTAAGTATTGAGTGCTGCAGAGACCCAGCAAAGGAGTCTTAGCTGAGAAC  
 TGATCCTTTGCTGAGTGACGAGGACATTATTGAACCGCAGGCTTGTGGCATGTTGCATGGTAACAGAC  
 CAGTACACCAAAACAGCAGGAGCTGTAGCAGAGAAAGAGTTTAATAATTGTGTGGCAGCCAAATAAGGAGA  
 CAGAAGGAAACCTTAAATCCACCTCTTGAAAAAGTCTGGGACTAGGCTTTTTAAGAGAATTCTGGCAAGA  
 AGGAGGCTGAGGAGCTGGGGGTAACATGATTGGTTAGGACATAGGAGAGGAGACAATAAGGATATAGAAAC  
 TCCATTCTTGCACTGGGTGAGTTCTCGGAGGGGGTCTCACTCTGGCTGGCAGCAGTGAACCCATTGGA  
 ATGCAGGATCTGAAAAATATCTCAAAATGGCAAACTTGAGGGGTTTTTTTTAGCATCAAAGATGTTATCT  
 ATAGAAGTTAGGACATTGTGACAGGGGCTACGTGACTTTGAAGTGTAAAGTGGCTGTGAGAAAGTGAGCT  
 ATTGCAGCGGTCCCCAACCTTTTTTGGTACCAGGGAGCAGCTTCATGAAAGAAAATTTTCCACAGATGGG  
 GTGGTGTAGGGTGGGGTGGGGATAGCTTCGGGATGAAACTGATCCACCTCAGATCATCAGGCATTAGTT  
 AGATTTCTATGAGGGGCACACAGCCAGATCCCTCAGATGGGCAGTTCACAGTAGGGTTTCACAGCCCTAT  
 GAGGTTCTAATGCCACTGCTGATCTGACAGGTGGCAGAGCTCAGGCAGTAATGCTTCTTGGCCACCACT  
 CACCTCTTGTGTGTGGCTCAGTTCTGACAGATTACGGAAGGTGACAGTTTGAACCCAGGCAGCTGG  
 GGACCTCTGGGCTGTAGGGTAGGCTGGTTAATGCTTAGCTGTGTTTCTATTCAAAGCTTATGCTTTTGT  
 TAAACCTAGTAATTTGGTTTTGTTAATTTTATGAAGATGATTTCAAGGATGAGTAGGATTAGCTGGAGT  
 CAGAAGGACACAAGGAAATTTCTGGCAACAACATTAACCTACCAGTGAATGTCTCATCAAGTCACTGGAC  
 CTCTAATTTCAAGCAGTACTGTCAACCTTATAGGTTATGATGTATAAGATAGTGTGTGATGTATAAGAT  
 AGTGCAAAAACCTAAGTTAATATCACCATTTCTGTAGTACTCTTATTTCAAAGGAAAAATCTTCAGCA  
 GTCTAATATCTACCAAAATTTTGAAGTCAAGACCTCCCTACACTAATCAAAGAACTAGAGGTGCAATCA

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GGCATATATTTGGAAAGGCCATAGGTGCCCTCCCTCTGTCTTGTCTCCAGCATACTAACTATAGTCT  
 AAAAGACTTTAAAACTTGAAGTGAAGAAAACCTTAAGGAAACAACAACAAATTCATTTATTTCCCTGAG  
 CCCAAAAGTAGAATAATTTGTTTTTAATGAATTTTCTTTCCCTGTAAGACATACTATGAATTTGTTCAAT  
 GGGTATTCAAAGCATATGTAATAGAATATGTATGCTTTCCGAAAAATTGAAATGGAACATCAAAGTGT  
 CTGTAAGTTTGTAGTCTAGACCAACTCACAGCACTTAGCCAGAAATATGTACATCTGCATCTGCCACTC  
 ATGGCCCCATCGCTCCCTCCAAGTCTCTCTTGGGCTGAAGGATGGAAGCAAACTCCCTGCGTTGAG  
 TTCCATCTTGCCCTGCATGGCCTCCCCATGGGGTCAATGAGCTCCCCACCAGCTTCCACCTCTCCAGC  
 ACTTTCCGCCAGAGGGCCCGTGGCTGCTTTTGCAGACTGAAATTGATTGTGGTTGATTCCAGCTCCATTTT  
 CTCTGAGTTTTACTTTAGATGTGCTTTTATGGTTGCATTTTCTTCTGCGCATATAAGAAAGACAGCAAC  
 ATTCCATGGAACAGAGTGATGTCTGTGGCTTTGTCAACCGTTGTTTGTAGCTTGATCACCATTATTTGA  
 GTGTTTACTACTTTCCAGGCATTGTGCTAAGTGGTAGAAATACAAAGTTGCCCTTACTTGATTGATCTGT  
 AAAATAGAGAGAGTAGTAGTTCCCTACAGTGTGGTTTATGTGAGGCATAGGGACTGCTCCCTGAAACCTAG  
 GGACAACCTCCCTAGCAGCGACCCAGTGTCTCATATCAATAGTGGTAACAATTAGGAAGGAGCTCCTACCT  
 CAAAGACCTCATGATCTGATGGTAAAGACAGATATAACAAGAAAATTATCTTTTTAAATATAAAATTTGT  
 GATATAAAAATAGTTTTTCAATAAATTGGATTTTTATGAAATTTACAGAAACAAATAATTAATTAAGGAA  
 ATATAAAACCACCTGACATTAGCCAACCATGTTGATGTTCTGATTATGTTACTGCAAAGGAGTGTAGGGT  
 TAAGAACGAGGGACTTTGATTCCAAGATCAAAATCCCTTTCTGCTATTCTTAGCTGTCTGACTTTGGGCA  
 AGTTGCTTAAACCCCTTTGTGCTTCTGTGCTTGGCCATGAGATGGAGATTATAATAGCGTCTACCTCAT  
 AGGGCTATTTTAAATACAGTTAGCTCTTAGAACAATAACCTACTTAACTAACAAATTTGATTAGGTACT  
 GTTTTATCTCCATCCGTACTGTGTATGCATATATTCATATTTATATTACATATTCTAATTAGGATTAT  
 ATACATGTACTTTCTTTAAATAAAGATTTTAAATAACTATATAATCAGTCATGATGATACAAATGATT  
 TATTCAACAAATCTGATGCTGTTAAACACGTAAGTGATTCTCTTTTCCAGGATTATAAATAACATTTGTTT  
 TGCATTTTTTTTCAATACATCTTTTGCATCTTTTCTGTTTCTTGTATATGTTGCTAGAAATTTGATTG  
 CTGGTGAAAAGGGTATAAACAATTTTTAAGGCTCTTGTCTACATATTGCCCTGCTCTTATACATATTGCCA  
 CTGCCCCAGGAACTATCAATTACACTTTTACCAAGAGTGATGAAAGCATTCACATGAATGTAACCTTA  
 TCATGCAATGCGGGCATGAGACAGAGGAGAGTTATGGAGGGTAGACGGCTTCCCCGCTGCTCAGCCACT  
 GCCCTCTCCTCTTAAAGAGCCACAGTCAGGAATTTCTACATAGATCCTATTATAAACAATCTCCTTTTGAA  
 ACAATTTATCTCTCTCAGAGCATTTTCTTCAATTTAGTATCTATATAGGTCCTTGTATGTTTCAATTTA  
 AGTTTTGTGACTGCACTGACACAATGCTGATGAAGTCTTATCCAGGCAGTCTGAGTTCTCAAAGCAT  
 TTGCATTTTATGCTTATCTCTGTTTGGGCTCTTTGCCACTGATTTTTTTTTAAGTGATATTTAAGA  
 AAGAGAGGGTTGATTGTTGTGTGATCTCTCTTTTAAAACTTTTCTAGGGAAGGACAACCTCTTCC  
 AAAGACTTTGTTGCTTTGTGTGATTGGCATGTCTTCCCTGGTCAGTAATGAGCTTGAAGGAAGCTACT  
 GGACACGGGACTGAACATGGGGTTTTGCTATCACTCTAGCTGTGCCCTTCTCTAGTGATCAAGGAGATGT  
 TGGTTGAGAAAGTGCCCTGTCTAATCCCACTAAGGCCCGAAGGACCAAGTGCTGTCTACTCTCCAGATTC  
 TCTGCAACAGAAAGCAGATGCTTAGGCTTCATGGTCCAGGTTGGAACAGGTAGTTAGCTCTGAGGACAGT  
 TATGCATGAATGTGAGGAGGGGACTGGCAGGGGAACATTTATTTATCTTTTAAATTTGGAATCAACAGTT  
 ATGGATGAACCCAGAATGCAAAATTCATTTTCTGACACGCAACACATCTGTCTTTTCTCTTTGAA  
 TAGCAAGTATTAATCATTGAGTTAGACAATGTAACCTTCACATTCAGTGAAAGCCAAACACTCAGCACCT  
 TCTAGAAAATCTTAGTGCCATGCTTTTCTTAGCATATTGCAAGTCTCTGAGGATGATGTGTTGTTTCAAG  
 TTTGAAGCTGATCTTTTGTACTTGCTTATGTAGCTCAGGCTAGTGATAACATGCCAGAGGCATTTTCAAC  
 TAAGAAAATTTATTCAGAAAGCTTTAATTAACAAATTTGTTAGCCCCACTTCTGCTAAATGGCCAGCCT  
 TGAAGAGTTTCGAAATGTGAGCAGCCTTAAGGATGATAGAAATATTATGAATAGTAATAAGTAATACC  
 CATACAGAACTCTTTTCTTTTGGAGTATCCGTTTCTCAGGCAGATTTCCCTCTCAACAGTCCAGGTG  
 TTGACGAAGATCATGAAATAATAGGAATGAAAGGGACTTCGATTTTGTATTTTAAAGCATTTTCTCTCC  
 ACCAAATTACGAAAGTAATGCATGACCAAGGCAGAGAACTTGGAATAACAGAAAAGCCACCAAGCAAAA  
 TAATCTCCCAAGAAATCATAATTTCAACACACAAAAGTAACCATTTGTCAACATTTTGGTGAAATCTCTTA  
 ATTAAGAGACTCTTAAAGATGCCAGTTGCTGCCACTTCTTCTCTCCACCATCTGACCCCTG  
 TTTTGAATGCAGAATTGTTTCTAAATCATTCAGGAAAATTTATAGTTTCTCAAATATCTCTGGAGGC  
 GAGTCTGTTGGCAGTCATTTCTAGTTTCTCACAAACCTTGAAGTTAGGAAATTTATTTGTGTAGCTTTTGA  
 GCACTGGGCCAGAAAGTGAGGGATGTTTGGGTTCTAGTTCCAGCTCTACCACTTATTTACCAACTGGCCGA  
 CCTCAGGCAAGTCCAGGCTAGCGGCCCGCTCAAGCCCTCCAGATGCAGCATCTGCAACCCCACTTCC  
 TTCCTCTCTTCCGCTCAGTTTCCCAACAATTTCTTAGTAATTTGACTGAATCATTTGTTTTTCAATTTT  
 TACATTAATAATTTATTTATTTATTTATTTTAAAGACTTTATTTTTTAGAACAGATTTAGATTTGCAG  
 CAAACTGAGTGGCAAGTACAGAAAGTTCCCATATATTTCCCTGCCCCCGCACATACACAGTCTCCCTCAC  
 TATCAGCATCCCAACAGAGAGGTACATTTGGTTACAGCTGATGAATCTACATCGACAGCTCATTATCAC  
 CCAAGTGCAATGTTGCATTGGCGTTGGGCATTTTAGGGCTTTTGACACATGTATGCATTTTGTAAATA  
 TACAGAATAATTTCACTGCCCTAAAAATCCTCTGTGCTCCTCTATTCTCTCCCTCCACCCCATTTCC  
 TGGCAACTACTGATCTTTTACTGTCTCCACAGTTTGGCTTCTCCAGAATGTCATATACTTGGAAATCAT  
 AAGGTTTGTAGCCTTTTCCAGATTGGCTTCTTCACTCAGTGATATGCATTTAAGGTTCTTCCATGTCTTT  
 TTATGGCTTGATAGCTCATTTCTTTTATCATTTGAATACTACTACTCCATTGCTGATTATACACACTT  
 TATTTATACATTCACCTACTGAAGGATGTGTTGGTTGCATCAAGTTTGGCAATTATGAATGAAGTTGC  
 TGTAAACACCCATGTGAGGTAATGTGTTGATATGCATTTTAAATGCTTTTGGATAAAACACTCAGGAGC  
 ACAATTGCTGGATGTTATAGTATGTTTATGTTTGAAGGAACTGCCAAACCATCTTCCCAAGTGGCTGTA  
 CCATTTTCCATTTCCACCAACAATGAGTGAGAGTTCCTGTTGCTCCACATCTCATCAGCATTTTGGTGT  
 GTCATGTTCTGGATTTTGGCCATTCTAACAGGTGATTGTGGTATCTCATTTTGTTTTAAATTCGCATTT  
 TTTGGATAATATCACATGGAGCATCTTTTAAATAAGCTTATTGGCATCTGTGTGCTTCTGTGGTGAGGT  
 GTCTGTTTAACTCTTTGGTCCATTTTAAATCAGGTTGTTTGGCTTCTTATCTGTTGAGTTTAAAGCT  
 CTTTGTATATTTTGGATAACAGTCATTTAGCAGGTATGTCTTTTGGCAAAATTTTCTCCAGTCTGTGGC  
 TTGTCTTCTCATTTCTGAGATCAGTGGTTTTTACACTTTCTTCTGCTGAAGCCAAGTATTGTGAAGA  
 AGCCATGGGGTCAACAGAGGATAGGTGCACAGGGTAGTGAGGGAAGTTGGAGTGAATGGGCTTGGTGCC  
 CCCACCCCGCAACATTTCTCTTCTTAAATCAGAGAAGTTTGACTTCATCCAGATTGCATATGAGGACTT

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TACATGAGGTTACCTTTTTATTTGTTTTAAAGGGGTTTTACTCTCAAATGTTTTAAAGACCACTGA  
 ACTAGATGATCATCTTAAGGCCCTTTAAGATTTATGATTCTGGAATTCGTGGCTCTATTTTCCAATG  
 TAATATAACCTTCTCTCGTTAAGGAAAAATGAGATAAACCTGTTATAAACACTCATGTGACATTTTTTC  
 AATACAGTTTTTCATCCACGTAGTGCCTACCTAGAAATGATAGAAACAATACACCTAAAGAATATGCACCAT  
 TCACTTGCCCACTCATCTCTCAAAGAGAGGAACCTTCAACACTAGTTATCTTTTTAAAAATAATCAGAGA  
 GAATTTCTCAGCCACTCAATTTCTAGCCCAAGAAAAAGAGGAAAAATACATTTGAAGGTTCTGGCTCATG  
 TGATACATTTGCAAAACCAAGATGATATGACTCTCATTATTAGTGACTATTGCAAAAGCTTTTGCA  
 GGCTATTAAGCAGGCTGTTCAATTTAGGGTGATATGGACATGTGCATATTGGCCAATTATATATGCTCAG  
 ATCGTATGTCATTTTTTTCTGTCATTTAGTCTAAGTGTGAGTAGGTGTTTCATGATGTTTTATAAACA  
 CTTCTGTTACATTAACTTGTTCATTGATTGGCAAGGAATGAAGGGGTGTCATTTTCATGATTTTATT  
 TGTATATTATGATTCCACAGAGGATTTGAAATGCCTTACCAAATTTTATGTAATGTAAGGGGTAAACC  
 AATATTTGACACATCATTATAAATTGAGGATAATCTGAAGAAAAATAAATCCAGGAGACAGATTATCA  
 CACTGATATGTTTGGCTCTGTGTCCCCACCCAAATTTTCATCTGAATTTTACTCACATAATTTCCATGT  
 GTTGTGGGAGGACCCAGTGGGAGATCATTGAATCATAGGAGTGGTTTCCCTCCATGCTGTTCTCATTGT  
 AGTGAATAAGTCTCATGAGATCTGATGGTTTATCAGGGGTTTCCACTTTTATATCTTCCCTCATTTTTTC  
 TCTTGCCACCACCATGTAAGAAGTGCCCTTTCGCCCTCCACCATGATTCTGAATTTCTGAACCCCTCCCGAGC  
 CATGTGGAACGTAAATCCATTAACCTCTTTTTCTTCCAGTCTTGGGTATGTCTTATCAGCAGCAC  
 GAAAAATGGACTAATACAGTAAATTTGGTACAAGGAGTGGGGTGTGCTGAAAAGATAGCCGAAAAATGTGGA  
 AGCAATTTTGTATTTCCACAGAGGATTTGAAATGCCTTACCAAATTTTATGTAATGTAAGGGGTAAACC  
 TGGGAAAGTTTGAACTTCTAGAGACTTGTGAATGGCTTGACAAGAATACTGATAGTGATATGAACA  
 ATAAAGTCCAGGCTGAGGTGGTCTCAGATGGGGATGAAGAAATGTTGGGAAGTGGAGCAAAGGTGACTC  
 TTGTTATATCTTAGCAAAGAGACTGGTGGCATTACCCCTGCTGTAGAGATTGTGGAATTTGAACCTTG  
 AGAGAAATGATTGGGTACCTGGTGAAGAAATTTCTAAGCAGCAAAACATTCAAAAGGTGACTTGGGT  
 GTTGTAAAAGCATTCTGTTTTAAAAGAGAAACAGCATAAAAGTTTCAGAAAATTTGCAGCCTGATGATGC  
 AGTAGGAAAGAAAAACCCATTTTTTTGAGGAGAAATTCAGCTGGCTGCAGAAATTTGCATAAGTAACAA  
 GGAGCCAAATGTTAATCCCCAAGACAATGGGGAAAAATGTCTCCAGAGCATGTATAGGTCTTCATGGCAG  
 CCCCTCCATCAGACCCCGAAGCCTAGGAGGAAAAAACAGTTTGTGGGCCACTCCAGGGTCCCCA  
 TGCTGTGTGCAGCCTAGGAACCTGGTGCCCTGCATCTCAGCTGCTCCAGCTATTGCTAAAAGGGGCTGAG  
 GTACCAGGTTTCAGAGGTTGCAAGCCCCAAACCTTGGCAGCTTCATGTGGTGTGAGCCTGTGTGTAC  
 ACAGAAGTTAAGAATTGAGGTTTGGGAACCTCCACTTATATTTTCAGAGATACGTGGAATGCTGGATA  
 CCCAGGCAAAACATTTGCTGCAGAGGTGGGGCCCTCATGGAGGGCTCTGCTAGGGCAATGAGGAAGGGAA  
 ATGTGGGGTTGGAACCCCCACAGAGTCCCCACTGGGGCACTGCCTAGTGGAGCTGTAAGAGGAGGACC  
 ACTGTCTCCAGACCGCAGAAATAGTAGATCCACTGACAGCTTGCAACATGTGCTGGAAAAGCCACAGAC  
 ACTCAACGCCAGCCTGTGAAAGCAGTCAGGGTTGGAGGTGGTGGTGGCTATACCCCTATAAAGCCACAGGG  
 GCAGAGCTGCCCAAGGCTATGGGAACCTACCTCTGTCATCAGCATGACCTGGATGTGAGACATTCAGTCA  
 AAGGAGATATTTGAAGCTTTAGAAATTTGACTGCCCTGGTGGATTTTAGACTTGTGTGGGCCCTGTAAACC  
 CCTTTGTTTTGGCCAATTTCTCCATTTTGAGCTGCTGTATTTACCAATGCCATAAAGCCGATTGTATC  
 TAAGAAGTAACTAGCTTGATTTTGTATTTACAGGCTCATAGGCAAAAGGGGACTTGCCTTGTCTCAGATGA  
 GACTTTGGCACTGTGGGTTTGGTTTGAATTTGAAATGAGTTAAGACTTTGGGCGACTGTTGGGAAGGCAT  
 GATTGCTTTTGAATGTGAGGACATGAGATTTGGAGAGGCCAGGGGTGGAATGTTATGGTTTGGCTCTGT  
 GTCGCCACCCAAATCTCATCTTGAATTACTCCATAATTCCAAAGTGTGTGAGAGGGACCTGGTGGG  
 AAACAATTTGAATCATGAGGCCAGTTTCCCTTACTGTTCTTGTGGTAGTGAGTAAGTCTCACGAGATC  
 TCATGGTTTTTCAAGGTTTCCGCTTTTGCATCTTCCCTCATTCTCTTGTGCTGCCATGTAAGAAGTG  
 CCTTTCACAAGCATAAGGAAGAAGTATACTTGCTGGAGCAGCAGGCTGTCCTTCTTCTGACGATATGGAC  
 TGCAAGTGCCATGTTTACTTTGACCAAGATGGCCTTTCTTTTACAGAAAGCCAGGGTTACCCCTTGA  
 ATTTTCATAAGACCTCTCTTTCAGTGGGTTAGATACTCTTTTATATTTTATACTCTGTGAGGAAAAACAT  
 TTTTCTTTCAGCTTCTGCAAAATCAATCTTTTGGTTGCTTCCAAAGTAGGCTGAATAGGAAGCCTTGGTCTG  
 TAGCTCCCAGCGAGATCGAAGCAGAAGGCAGGTGATTCTGCATTTCCAAGTGGGACCTGGTTCATCT  
 CACTGGGACTGGTTGGACAGTGGGTGCAGCCACGGAGGGTGAGCCGAAGTGGGGCAGGGTGTACCTCA  
 CCCACAAAGTGCAAGGGGTCAAGGGATTTCCTTTCTAGCCAAGGGAAGCCGTGACAGACTGTAGCTGG  
 AGAAAGACTGACACTCTGACAAAAATACTGCACCTTTCCCAAGTCTTGCAACTGGAAGACCAGGAGAT  
 ACCCTCCCTTGCTGGCTCAGTGGGTACACGCCCATGGAGACTTGCTCACTGCTAGCGCAGCAGTCTGA  
 GATCAACCTGCAATGCTGCTGCTTGTGCGGGGAGGGGCTGTCCTTGTATGAAGCTTGAGTAGCTCAC  
 AGCGTAAACAAAGCAGCAGGGAAGCTTGAAGTGGGAGAGCCACCTCAGCTCAGCAAGGCCCTACTGCCT  
 CTCTAGATTTCCACCTCTGGGGGCGACACATAGCAGAAACAAAGGCAGCAGCAGCTTCCGACACTTAAA  
 CATCCCTGTCTGACACCTCTGAAGAGGGCAGTGGTTCTCTCAGCACAGTGTCAAGCTCCAAGAACCAG  
 AGACCGCCACCTCAAGCAGGTCCCTGACCCCATGTAGCTGACTGGGAGACACCTCCAGTAGGGGCCG  
 ACAGACACTTCAAACAGGCAGGTGCCCTCTGGGACGAAGCTTCCAGAGGAAGGATCAGGCAGCAATATTT  
 GTTGTCTGCAGCCTCCGCTGGTGATACCCAGGCAACAGGGTCTGGGGTGGACCTCAGCAAACTCCAA  
 CAGGCCTGCAGCTGAGGGGCTGACGGTTAGAAGGAAAACTAACAAACAGAAAGGAATAGCATCAACATC  
 AACAAAAAGGACATCCACACCAAAACCCCATCTGTAGGTCATCAACATCAAAGACCAAGGTAGATAAAA  
 CCACAAAGATGGGGAGAAACAGAGCAGAAAAGTGGAAAAATCCAAAAACAGAGCGCCTCTTCTGCTCC  
 AAAGGATTCCAGCTCCTCAGCAGCAAGGGAACAAACAGGATGGAAGATGAGTTTGTAGATTGACAGAA  
 GTAGGCTTCAGAAGTGGTGAATAACAACTTCTCCAAGCTAAAGGAACATGTTCTAACCCATCGCAAGG  
 AGGCTAAAAACCTTGAAAAAGGTTAGATGAATGGCTAACTAGAATAAACAGTGTAGAGAAGAACTTAAA  
 TGACCTGATGGAGCTGAAAAACACAGCATGAGAATCTCGTGATGTATGCACAAGCTTCGATAGCTGATTT  
 GATCAAGTGAAGAAGGATATCAGTGATTGAAGATCAAAATTAAGTAAGTGAAGAAGCAAGATGA  
 GAGAAAGAAAGAGTGAAGAAGCAACAAAGCCTCCAAGAAATATGGGACTATGTGAAACAAACAAATA  
 TATGTTTCATTGGTGTACTGGGAAGTGTGGGGAGAAATGGAACCAAGTTAGAAAACACTCTTCAGGATAT  
 TATCCAGGACAACCTTCCCAACCTAGCAAGGCAGGCCAACATTCAAATTCAGGAAATACAGAGAACACTA  
 CAAAGATACTCCTCAAGAGAGCAACCCCAAGACACATAATTTTCAGATTTAAAAAGTATGAAATGAAGG

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AAAAAATGTTAAGGGCAGCCAGAGAGAAAAGTCGGGTACCCACAAGGGAAGCCCATCAGACTAATGGG  
 ATCTCTCAGCAGAAAACCTACAAGCCAGAAGAGAGTGGGGGCCAATATTCAACATTCTTAAAAATCTTA  
 AAAAAAGAAGAAATTTTCAACCCAGAATCTCATATCCAGCCAACTAAGCTTCATAAGTGAAGGAGAAAA  
 AAATCCTTTACAGACAGCAAAATGCTGAGAGATTTTGTACCACCAGGCTGCCTTAGAAGAGCTCCTGA  
 AGGAAGCACTAAACATGGAAGGAACAAACAGTACCAGCCACTGCAAAAAATTCCTCAATTTGTAAAGACC  
 ATCGAGCTATGAAGAACTGCATCAATTAACGGGCAAAAATACCAGCTAACATCAGAATGACAGGATCA  
 AATTCAAACATAACCAATATTAACTTAAATGTAAATGGGCTAAATGCTCCAATTAAAGACACAGACTGG  
 CAAATTGGATAAAGAGTCAAGACTGTGCTGTATTGAGGAGACCCATCTCACGTGCAAAAAATGCACATAGG  
 CTCAAAATAAAGGGTCGAAGGAAAATCTACTGAGCAAAATGGAAAGAAAAAAAAGCAGGGGTTGCAATC  
 CCAGTCTCTGATAAAACAGAATTTAAACCAACAAGATCAAAAGAGACAAAGACAGCCACAACAAGAAGA  
 GCTAACAGCCCTAAATATATATGACCCAGTACAGGAGACCCAGATTATATAAGCAAGTCCCTAGAGAC  
 CTACGAAGAGACATAGACTCCACACAATAATAATGGGAGACTGGGAGACACCCACAGTCAATATTAAA  
 CAGATCAACAAGACAGAAGGTTAAACAAGGATATCCAGGACTTGAATCAGCTCTAGACCAAGTGGACCCA  
 ATAGACATCTACGAACCTCTCCACCCCTAATCAACAGAATATACATTCTTCTCAGCACCACATTGCACTT  
 ATTTTAAATTTGACCAATATAATTTGGAAGTAAACACTCTCTCAGCAAAATGTAAAGAACAGAAGTCAACA  
 AAATGTCTCTCAGACCACAGTGAATCAAAATAGAACTCAGGATTAAGAACTGACTCAAAATCCACACA  
 GCTACGTGGAACCTGAACAACCTGCTCCTGAATGACTACTGGGTAAATAACAAATGAAGGCAGAAATAA  
 AGATGTTCTTTGAAACCAATGAGAACAAGGACACAATGTACCAGAATTTCTGGGACACATTTAAAGCAGT  
 GTGTAGAGGAAATTTATAGCACTAAATGCCCACGAGAGAAAGCAGGAAAGATCTAAATCGACACCCCTA  
 ACATCACAATGAAAGAACTAGAGAAGCAAGAGCAAAACAATTCAAAAGCAAGCAGAAGGCAAGAAATAA  
 CTGAGATCAGAGCAGAACTGAAGGAGACAGAGACACAAAAGCCGTGCAAAAATCAGTGAATCCAGGAG  
 CTGGTTTTTTGAAAGATCAACAAAATGTATAGACCACCTAGCAAGACTAATAAGAGAGAAAGAGAGAAAG  
 AATCAAAATAGATAGCAATCAATATAAAGGATATCAACACCGATCCACAGAAATCAAACTACCAT  
 CAGAGAATACTATAAATCTCTACGCAATAAATGGAAATCTAGAAGAAATGGATAAATCTCTGGAC  
 ACATACACCCCTCCAGACTCAACAGGAAGAAGTTGAATCTCTGAAGACACCAATAACAGGTAAGTGAAC  
 CAAGGTTTGGACCAACCAAAAATGTCCAGGACAGATGGATTACAGTTGAATTTCTACCAGAGGTACAAA  
 GAGGAGCTGGTACCTTCTCTCAGAACTATTCCAATCAATAGAAAAGAGGGACTCTCCCTAACTCAT  
 TTTATGAGGCCAGCATCATCTCTGGTACCAAACTGGCAGAGACACAACAAAAAAGAGAATTTTAGGCT  
 AATATCCCTGATGAACATCGATGTGAAATCTCTCAATAAATACTGGCAAAACCAATCCAGCAGCACATC  
 AAAAAAGCCTATCCACCAAAACCAAGTCAGTTCATTTCTGGGATGCAAGACTGGTTCAACATACGCAAA  
 AAATAAATGTAATCCATCACATAAACAGAACCAATGACAAAAACCACATGATTATCTCAATAGATGCAGA  
 AAAGGCCCTTTGACAAAATTCACAGCCTTTCTGTCTAAAACTCTAAATAAATAGGTATTGATGGAACG  
 TACCTCAAAATAAAGAGCTATTTATGACAAACCCACAGCCAATATCATCTGAATGGGCAAAACCTGG  
 AAGCATTCCTTTGAAAACCAAGCACAAGATAAAGATGCCCTCTCTCACCCTCTTCAACATAGTGTT  
 GGAAGTCTGGCTAGGGCAATCAGGCAAGAGAAAGAAATAAAGGATTTTCAGTTAGGAAAGAGGAAGTC  
 AAATTTGCTCTGTTTGCAGATGACAGGATTGTATATTTAGAAAACCCCTTGTCTCAGCCCAAAATCTCC  
 TTAAGCTGATAAGCAACTTCAGCAAGTCTCAGGATACAAAATCAATGTGCAAAAATCACAGGCATTCTCT  
 GTACACCAATAATAGACAAACAGAGAGCCAAATCATGAGTGAATCCCATTGAGAATTACTACAAAGAGA  
 ATAAATAATGTAATCCATCAACTTACAGGGATGTGAAGGACCTTCTCAAGGAGAACTACAAACCACTGC  
 TCAACGAAATAAAGAGGACACAACCAATGGAAGAACATTCCATGCTCGTGGATAGGAATAATCAATAT  
 CACGAAAATGCTCATCTGCCCCAGGTAATTTATAGATTGAGTCTATCCCCATCAAGCTACCATTTGACT  
 TTCTTCACAGACTTGGAAAAAACTACTTTAAAGCTCACATGGAACCAAAAAAGAGCCTGCATAGCCAAAG  
 ACAATCTGCTGTAAGCAAAAGAACCAAGCTGGAGGCATCACGCTACCTGACTTCAACCATATACAGGCTA  
 CAGTAATAAAGCAGCATGGTACTGGTACCAAAATAGATATATAGACTAATGGAACAGAACAGAGGCCTC  
 AGAAATGACACCACACATCTGCAACCATCTGATCTTTGACAAACCTGACAAAAACAAGAAATGGGGAAG  
 GATTCCCTATTTAATAAATGGTGTAGGAAAACCTGGCTAGCCATATGTAGAAAGCTGAACTGGATCCCT  
 TCCTTACACTTACCTAGCAAAATTCGCTCAAGAGGATTAAAGACTTAAATGTAGACCTAACACCTAGAA  
 GAAAACCTACACAATACCATTTCAGGACATAGGCATGGGCAAGACTTTATGACTAAAACACCAAAAGCAA  
 TGGCATCAAAAGCCAAAATAGACAAATTTGGATCTAATTAACCTAAAGAGCTTCTGCACAGCAAGGAAAC  
 TATCATCAGAGTGAACAGGCAACCTACAGAGTGGGAGAAAATTTTGGCAATCCACCCATCTGACAAAGG  
 CTAATATCTTTGTAGAATCTGCAAGAACTTAAACAAATTTACAAGAAAAAACAACCCATCAAAAAAG  
 TTGGCAAAAGGATATGAACACCTTTACACTGTTGGTGGGAGTGTAAATTAGTTCAACCATTTGTGGAAGACA  
 GTGTGGTGATTCCTCAAGGATCTAGAATAGAAATACCATTGACCCAGTGATCTCATTAGTGGGTATAT  
 ACCCAAGGATTATAAATCATGCTACTATAAAGACACATGCACACATATGTTTATTGAGCAGCTATTTCAC  
 AATACCAAGACTTGAACCAACCAACCAATGTCCATCAACGATAGACTGGAATAAAGAAATGTGGCAGATA  
 TACACCATGGAATACTATGCAGCCATAAAAAAGGATGAGTTCCCTGTCTTTGCAAGGACGTTGGATGAAGC  
 TGGAAACCATCATTCTAAGCAAACTATCATGAGGACATAAAACCAACACTGCATATTCTCACTCATAGG  
 TGGGAGTTGAACAATGAGAACACATGGACACAGCAAGGAACATCACACACCGGGGCTGTGAGGGGTT  
 GGGGGCTGGGGGAGGATAGCATTAGGAGAAATACCTAATGTAAATGATGAGTTGATGGGTGCAGCAAA  
 CCAACATGGCACATGTATACCTATGTAAACAACCTGCAGTTGTGCACCTGTACCCTAGAATCTAAAGTA  
 TAATAAAAAAAGAAAGAAAAGAAAAGAAAAGAAAGTGGCTTTTACCTCCACCATGATTCTAAGG  
 CCTCTCAGCCATGTGGAAGTGAAGTCCAGTTAAACCTCTTTTCTTCCAGTCTCGAGATGTCTTTAT  
 CAGACCGGTGAAATGAACCTCATACACACACAGAGTATATCTTTACAGTTCCAGGATGGACTGCAA  
 GTTTGGCTCTAAATTTCTTTGCTGGCCAAAACAAAAAGAACACATTTTATTATAAGGTTACAGGCTT  
 TTAATTGAAAAAAGAAAAACAGTTATTCAACATGAAAACCTTTTTCAGACAAAGTTCTACAAAGTC  
 TATTTCTCACAAGTAGGACTTTGGCAAGGATTGTGCAACTGACAAATCAAAAGTCATTATTCCGTGGTGA  
 GAAACCGGATACAGATCTTACCAGTTAGGGGATGATCCATGTGTTTTGATAATCACCTTTGGTGGTAT  
 CAGACTAAAGGTCTCTATGAAAACCAATTAACCTCACACTATAGCTGATAGGATGCAGTGAAGCCCTTAC  
 CGCTGACTGCATGGATGAGAGCTAGGCCAGAGCATTGGCAGGCAGAGTTTATAACATGGGGCAGGAAGCA  
 TTGAAATTCATTCCACCTCTTGGTGTATCAGGTCAGGAGTCAAATCTCTATCTTCTCTCTGGATCG  
 CTTTCTCTCTGAAGTGTCTGGCATAGATGTCTAGGTATAGCTTGGCATGGTGGTGTGCTATAGACCC

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AGCTACTTGAGAGGCTGAGGTGGGAGGATTGCTTGAGCGCAGGAGTTTGAGGCTGCAGTGAGCCATGACC  
ACACCACTGTACTCCACCTGGGTGACAGAGCAAGACCTGTCTCTCTTTCTAAAAAACAACAAAAAC  
AAAAAACAACAAAAAAGAGATGTCCAAGTGTGTTCTGGTTACTGCTGCTGACTGCTAAATTTAAC  
AGCTAGAAAAAAGTTTGGACTCTATGGATCATAAATTTGGATAAGACACAGAGGAATGGCTTGTCT  
CATGTTCCACATGTCTAAAGTCTTAAATGGGGAGAGTCGTCAACCAGGGGTAATTTGAGAGTTATGGGCT  
GGAACCACTTGAGGCATCTTTATTCATAGGCTAGCAATTGATGTTGGCTGTTGGCTGGGACGTGAGCTG  
GAGCTGTCAACTGGGAGACCTGTCTGATATCCCAGCATAGGACACTAGACCTCTCAAAAAGTGGCGAGGG  
CTCCAGAAGCAAGTGTCCAGCTGACAAAAAAGTTTCATAGCCTTCTACGACATGCACTTAGAAG  
TGGTAATGTGTCACCTCCAGCCCTTCTGTTGATTACAGTGAAGTATGAGTCCACTCAGTTTCAAGGGA  
GAGGGCCAGATCCCATATCTCCATGGGAAGAGTGCCAAGAACACCTTGTAAGAAAGCTTGTGGATAGGA  
GATATGTTGTGGTTCATCCTTGGAAAAACAATCTTCCACAGTGTGCAAGAGAGGCTTCTGCTCTGCAT  
TGTGGCTTAATTTATGTTGAAATACCAGGCAAGAAAAGGTAGGATCCAGGGAACAAATGTATCCAGGAT  
GTTTTGGTCTGCCTTTTCTAGGAAAAAGGAAACCTCAAAGCCTCTGAGACTAGGTCACCCAGTGGGA  
CTAGAAGTTCACGTTGGAACCTTCTGCAAACTCCTCTGCAATAGATGGACTGTGCATTTTCCAATGTGT  
CTTTAGATCTCTTCTGACCTTGGGAAGATAGTAACCTGACTGTGGAGTAGGAAATCCAGAACCCTG  
ATTGTTTTAAATATATTTACAGATACAAGTAATGAAAAGAAGGCTCCTAAGGAAATATAGATCCGTAAT  
GGCTTTGTCCCAAAAGCTATTAGGCTATAATATTTTATTACAAGGCTATATTTATTACAAATGTATTT  
AAATAAATACTTAATATTTTAAATAAATAATATTTTATTATTATTAATAATTAATTTAAATAAA  
TATAATGTTTCTTACAAAAATTAATAAAGTGGGACTTTATATTTAAAGGTGAGACATTAAATTTCTTTAA  
AAAGTGCACATGTAAGATTTTTTCTCAAGTCAACTGAACCACTCATCAGTTTCACATGAATGTGTG  
ATGCACCAAGTATTTACTTTCTAGAACATCTAGTAGACGTCACATAAAATTTATACCAAGTTGAAAAATG  
TCACCTGAATCAGAGGCATGTGGTGGTTATGTAGTCATCTGTGCCAGCTGGGAATATAGCAATACCAAT  
GAACAGCATCTCCATGTTCCCTTGTGGTTCAGCAAAAACACTCATCTTCTGCTGCTCTCTTTGA  
GACCTCTTAGAGAGGACTTTGATGAGTGTATGGTCTTATACACACTAGTCTAACAATACACATTTGCTCA  
AGGATTTGGGTTACGAGCAGGCTCTTCACTTTCAGGTGAACAATTACACATCAGGAGAAGGATGGAAGTT  
TCCTATCTATGAACAAATATTTCCCAAAGCAATAATCTCTTATTCAACTCACATAATGAGAAGTCAGTT  
CCTCTGTGCCATGCAATCTCTTGAAGTCTTCAAGTCTTCAAGTCTTGAAGGTTTTAATGTTGAGGCTTTAT  
CAAACTAAACATTCAAGTGTCTTAGGCTTTCCCTTAGTTCTTTGAGCAAATTTGGTGTCTATGAAGTATG  
TTAGTGTTCGAATGAATGGATAGCATGATGGGGGATGCTAGGTGGTTCCAGAATTTAGATTTGTGGTTT  
CCATAACAAAGTGTGGCAGTATTGGCATTAGGGAAGAGAAATGACTTCAAATAACTTCTCAAAGTTTAC  
TAAAGCCTTAAGAATGTAGGAAATGGCCACAAAAGGAGGTATACAAAACATTCTCTGCTTTATTCCTC  
TTTATACAAACGATTTCACTTTCCCATCAGCAAGTCATAAAATCTTCTCATCTTGCATTACAGTAGGAC  
ACCTACTATACAAATAGGCTACAAAATGTATAATGGCTCAAACACCTAGCAGTTTATTCTTATTTACTT  
AACAATGCTGGTCCACGAACATGTTGATATCATAACCTCTTTTATGTGGTCACTCAGGACTCAGGCT  
GTTGAGGGCTTCTTACCAATGTGAATGGGTGGCTTCCAAGTCTATCCTAAGAGTTATCTCCATTCTAACCA  
TCCAGCCAGAAAGGCAGAACAGGCTTGGAGGAGCAAGATATCCATGGATAGATCATCTCTTAAAGTCA  
TTGTAGCATTGTGATAGGGCTCTTTTCCAAAAACAAGGATACAGTCCATGTTTCAAGATTTTACATTTT  
AGTAGCCACAATACAAAGAAGCTAAGATAGTCTTGTGATTTGTATCATGAGGCTGTTAATGGAGAGTGT  
TAAAGCCTTGAATGTAGGCTCCACCTCAGCTTCCAATCAGGTTGGATGGAACCTGACAGCTGC  
ATCTTGTAAACTCCACGGGAGATTCTGAGAGACAGCCAGTTTGAAGTTCACAAACCTTAAGAGAAAA  
ATCTCTTGAATGGCATAACAAATACCAGTCTAATAAAACATACATATCTCTTGAAGTCTTAAAT  
GAAACAAATAGGTAATAATTTACCTGTACATATAATTAATAATGTAATGATTTTATAACCATCATATAA  
AGGAGAAATGATATTAAGATATATTAATAAATGATATATTTCAATGCAAGTATGCCCCAAGCTTGACT  
AAAGTAGGAAACATAATAAAGTAATAAATGCTTATATGACTTATAATGAATGTTTGGCTATGAGAAGA  
TGATCAGAGGCTTTTTGTCCAAAGATACAGGCATATGAAAAAGTAGAGCAAGAGATGGACACCAGACTG  
AGAAAACATAAAACTAACCAACCTATTTGTGTATGATAAAGGAGAGAAAAAATTGATTAGTAAAAAT  
ATGCTACCGTGTGGTCTGAATGTTTGTCCCTTCCAAACCTCATGTTGAAATTTAATCCCCATGTGGCAG  
TATTGAGAAGTGGGACCTTTAAGAGGTGATTGGTCAAGAAGATTCTGCGCTCATGAGTGGTTGAAACCA  
TTCACGGAATAACGGGTAAATGGATCAATGAGTTATCCCAGGAGTGGGACTGGTAGCTTTATAAGAGAAG  
GAAGAGAGACCTGCGCTAGCACACTCAGCTCCTTGCCATGTGAGCCATCTCGGGACCCCGCAGAGTCCC  
CAGCAGAAAGAGGCTTCCACCAATGTGTCCTTGGCTTACCTAGGATTTCTCAACCTCCATAACTGTAGGA  
AATGAATTCCTTTCTTTGTAAATATCCAGTTTCAGGTATTCTGTTATAAACAACAGAAAAATGGGCTAA  
AACACACGCCAAGAAATTTGAAGACTGTGGAAGTGAAAGAAGATAAAAAATGAAGTAATTTTGCAAT  
GAGTCTGGCTTTATTATAAGTGTATTGTCAAAGTATTCCCTTTGTTATAAGATGAAAAAGAGCCAAAT  
GGATAGAAACATTTATCCTATCTTAATATCCCACTACATTCAAGGCAAAATATTAGTCAGTCTCTAGAAC  
TTAACAAGGCCCTTGGAGATGATATCTTTGGATGAGCAATGGAGAAGACAAGATGGATTGAAAAAGAAA  
CAAACAAACAAAAAACATGTAAGAGGCTATCAGGAAAACTCTGGAGACGATGTCAATGTAAACAGATA  
CAAACCTCAAATAATTTTAATATGTACATTGCACAAAAATGGACTTCTTATCATGTTACAAATTTATTT  
TAAACATATGAGGAGGCAACAATATTTTATTGATGTGTAATTTTATAATTTGTTGGCTCTAATTTT  
ATTTAGTAGAGTCTTACATCTCTCTCTACATATTTACATCCGGTTGATTGTTTTTGTAGTACCTGTTC  
AACTGCACTGAAATCATTTCAATTAATGCATGGTTGAAAAGCTGACATAATACATTCAATTGCCAAAT  
GCATAAAGTGAATAAGCTATTTAATAATTTGGAGAAAAATATATCCATTTAACTTCTCTCTATAACC  
AGTTTACATACCTGGACCTTTTGGGCACAGCCATGTGAAAGCTTTTCAAACTTTTCACTACTTTTTTTTG  
AGACGGAGTCTCACTCTGTCAACCCAGGCTAGAGTGCAGTGGTGGATCTCGGCTCACTGCAACCTCCACC  
TCCCAGGTCCAAGTGTATCTCTGCTCAGCTCCCGAGTAGCTGGGATTACAGGCACCTGACACCACAC  
CTGACTAATTTTTGTAAATTTTAGTAGAGACAGGATTTACCATGTTGGCCAGGATGGTCTGAACTCCTC  
ATCTCAAGTGTTCGGCTGCTTGGCTCCCAAGTGGTGGTTACAGGCATGAGTCATTTGCACCCAGCC  
ACTATAGATTTTTATTGTAGTAGATTTAGTTCAAGTAGGGCATTTGAGAGGCATAGGAAGTGGAAACAAAT  
CCTTCATTGTTTGGGACTGCCCTGACATTTAGGACATCCAGTACAGTCCCTTCCACGAAGTGGCAGCA  
GCAGCCTCGGGCTGTCCAAACACCTGTTAGGGACAGTGCCACTCCCGGAACACAGAAGAACCACAATC  
ATAGGAGAAGCATACAACAACATGGTGTTCATCGGACGGTCAGTTTCAGTGGCACTTTTGAGCAAGCAC

FIGURE 1, sheet 91 of 94

1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424
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TCTAGATCATTTCTCCATGATGTGTCCAGAGTGATCATTCTAGAACCAATCTGATGTCTATCCTCTGCTT  
 AAAACCCCTTAAGTTCTCATTGCTTTTGTAGATAAAATATAAACCCCTTCACTTTGTTTTATTACTCCTTAT  
 GATTGAGCCCTTACTTAGCTTACAAGGACTTCCCTCATGTCTGAGCTCTAGCCATAATAGCTGACTGTTGG  
 ATGAGTCATCGGGGGAGGTTCTTCTTCAGGCTGCAGATTGGCGGTGAGCCCTCTGACCTCAGCTGGGC  
 TCACTCACACATCTGGGAGGAGCTGCCTGAGGCCAGGGTGACTCTGCTCTATGCCTCATGTCTCCTATC  
 CTCTTGTACCCACATGTTAGCTGGGACATGTTCTCATCGCAATGGCAGAGGCATGAGAAAGTGATCCTG  
 TTTGGGCAAGTGACATTTTACTCTTTTCTTTCACTCATGTCCACTGACATTTTATTGGCCAAGCAAGCATG  
 TGGGCTGTCCAGAGTCAAAGAGCGACATGTTGCCGGGTGATGACTATTTCTGAGCAATAATCTAACCTA  
 TCATAGCTCAGATCTCACTCCTTGCAGGAAGCATCTCCTAATCCTTAAGACCTAGTTGGAACCTTACACTC  
 TGTCTTCCCTATGTTTACTGCCATTTTACTATTTTCTGCCATTTAGACTGACAACTCTGTGAGCCA  
 TCATTGCAATATGGCTTGCTTACCAATATCACCTAGCATGATGTAGAGCACATAGTAAATACTCAACAA  
 ATGTTTTCTGTAAGAGCTAAGGAAGGACATCAGCAGACAAAATAGAGTCTTCTATGCCAAAAGGTGAAA  
 GTGGTCTCATTTCATTCATTTGTCTGTAAATTTGGCTAGCCAAAAGCTTAGTGGATACCATTTCCATAA  
 GTAGACCTCATCTGCAGGGAAGAGATGGGGAGACTGCTGGGTATTATTGTCAGACTCCAGCAGGACCAC  
 AACATGCAATAGGCTTGCTTACCAATATCACCTAGCATGATGTAGAGCACATAGTAAATACTCAACAA  
 AAGTGGTATCACTAAAAGGACAGGTACTCATGGGTGATGAAGCCTACATGACCTTGGGCTTACACCAGGA  
 CCTAGGAATGAAAGAGATTCTTCTCTTAGTGGCTATGAGGGAAGGCCTATGATGTCTTAAGGAGGTG  
 GATTGATCATTTTTAAGGGACCTTCAATCCTTAGACCGTGATTCAATGGTAAGAAGTTGCTCCATT  
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 TACTGAGTGAGTGAACAAAGAAATGAGGGAATGAATGGATGAACAAATGGCTCATGGCAGGCTTTCCCT  
 GCCCTGTGAATTCGGCTTCTACTTGGTAAGAAGGTGATTGCAATCTCTGTTCTCAGGGTTCCCCAAGGAT  
 TCCCTGTGTAACGAGATGAAGGAATCAGCTCTCTCAGGTAGAGTAGGTGACTGCATTCAGAGTATACATTC  
 CAGTCTCCCTGTCTTTTCTTTTGTAGTATTATAGAGAGGGAAGCCATGAGTGGATTAGATGCCAAA  
 ATCCCTGGCTGAGAGAATAACCTTACCCTGGAGGAAAACATATTAGCTTTGACTCTGAGCTGGGAATTTC  
 GGTGATGTTGTAGATCAATGCATTGCAGTTGGGTGTTTTATTGTTGAAAGGAATTGCTGAATTTTCA  
 AATCCATTAACTGCTTCTCAGCATTAAGCCATAATTAGTTAATACTAAGTAAATTTGCACTAAATATA  
 CAACCCCTGGCTGATTTTACTGGCCACGTCTGGCAGAGGCGAGCAGAGGAGAAAGCTCTGTAGAGTTTC  
 TGTGGGATCGTGTGAAAGCTGGAGAGGTTGCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC  
 TGACACACACACACATACACACACACAAATTGAATAATAATAATTTTGGTTCCTCACTAAGCCA  
 ATCTAAATCGCAGAGGATCAATTTTGTAAAGTAAGCTTGGCCCCAGCCATATGTTGCTACTCAGAGAATT  
 AATATCAGATTTTCACTGACTGTAAACGTGAATCATCAGGTTGCACAAGGAACACAGTGGCAGATCCAGG  
 GGGCATTAACTTTTATAGCATTTTAAATGAAAAAAGTAACACTTAAACAAGTAATTAGATC  
 ATGCTGTAGGCCCTGAATAGCTTTGATGTTGTGTTTTCATGGCAAGTCTCCAACCTGAGCTGAATTTCC  
 CCTGTAATAAAGTTCATTTTCTAAGACCTTCTCTTGGTCTGCTACTCATGATACATATTTCTTTAA  
 AAGAAATTTCAAAGTAGATAATAGTTGTTCTCTCTCCACCCCGCCACCAGTAGTGTGGTGGGCGAGCA  
 GAGTTGTGGCTAGTGGAGGAGAGCAGAGGAGGAGAGTAGGGAAAGGAGAAATGCCATTTGCCTACATTTCC  
 CTCTGCCCATTTCCCTCTGCCATTTCCCTCTGTTTCTGAAAGTGAAGTGAAGTCTGAGCTCTGGGCACTGTT  
 TTAGCTTAGCAGGAGGAGGATCAATAGGCTTCTCTAGGAATTCGCACTGAGGCTGTGAGTGTGTGCA  
 CGTGTGTGTTTGGAGGCGGAGAAATAAACACAAATAAATAAAGGAGAAATTCAGGCAGTGATAAGAGT  
 GCTGAGAAAAACAGAGGCTGTGAAAGAGGAGGCTGAGCCTGCAGAGGCTTGAAGCTGCTGCCACTGGG  
 TAGCGGTAGGCTTTCCAGAGGAGGCGGCAATTTGAAGACCGGAGGAGGTTTCATGCCAGCAAGTAGGAACA  
 GCAGTGTAGTTCCTTAAGTCTTGGGGAGGCTTAGTTCTTAAAGGCGAGCACAATAACAGTGTGGCT  
 CCGGAGAGCACATTAGGGGAGAGAGGAGGAGGAGGCTTGGAGACATGGATGGAAGCTGGACAGTTGGGC  
 CTTGTTGAACATGGAAGGCATTTAGATCGTATTCTGAGTTAAATGGGAAGTGACGTGAGAGATTAAACA  
 ATGGAGCGCTTGAAGTGTCTTACTCATTTAAATACCCACTCCTGCTTGGCTGAATATCTCATGTTGTC  
 TTTTGTAGAGCTTTGGCGATCCTATTGAATGCATTAGGTCCTATTGGAGGGGAATAGGATCTCATTTG  
 AGGCCACGGAGGTCCATGGAAGTCACTGCATAGCAAAATACCCCTGAAAGTGGCTGCAGGAGAGTGTGAG  
 GGTGGGACCGCCCTGGTAGGAGGTGGAATAAAGAAACACACGCGCATGAGTTCAGATTAGGGCTTCTG  
 AAAGCCCTCAGCTTTCCAGCTCCCATCTAAAGTGGGTCTTTAAACAGGAAGAAAGAAAGATTGCTAAG  
 TGTCTTTGGAGTTCTCTTCCCTTCTAGGATTTACGACTCTGGGGCTCGGGTTGGCTCTAAAG  
 GTAGTCTTTCTGTGCTTCCACCTACAGTAACAAAGGCATGGAGCATCTGTACAGCATGAAGTGCAAG  
 AACGTGGTGGCCCTCTATGACCTGCTGCTGGAGATGCTGGACGCCACCGCCTACATGCGCCACTAGCC  
 GTGGAGGGGCATCCGTGGAGGAGACGAGCAAGGCCACTTGGCCACTGCGGGCTCTACTTCATCGCATTC  
 CTTGCAAAAGTATTACATCAGGGGAGGAGGAGGTTTCCCTGCCAGGCTGAGAGCTCCCTGGCTCC  
 CACACGGTTCAGATAATCCCTGCTGATTTTACCCTCATCATGCACCCTTTAGCCAAATCTGTCTCTCT  
 GCATACACTCCGGCATGCATCCAACACCAATGGCTTCTAGATGAGTGGCCATTCAATTTGCTTGTCTCAGT  
 TCTTAGTGGCAGATCTTCTGTCTTCTGTTGGGAACAGCCAAAGGATTCAGGCTAAATCTTTGTAACA  
 GCTCTCTTTTCCCTTGTCTATGTTACTAAGCTGAGGATTTCCCTAGCTCTTACAGCTGAAGTCACTCAGT  
 ATGGGTTGGGGCTCAGATAAATCTGTGCATTTAAGCTACTTGTAGAGACCCAGGCTGGAGAGTAGACAT  
 TTTGCTCTGATAAGCACTTTTAAATGGCTCTAAGAATAAGCCACAGCAAGAATTTAAAGTGGCTCCT  
 TTAATTGTTGACTTGGAGAAAGCTAGGTCAAGGGTTTATTATAGCACCTCTTGTATTCTATGGCAATG  
 CATCCTTTTATGAAGAGGTGACCTTAAAGCTTTTATATGACTGTAGCAGAGTATCTGGTGATTGTCAA  
 TTTCACTTCCCCCTATAGGAATACAAGGGGCCACACAGGGAAGGCAGATCCCTAGTTGGCCAAGACTTAT  
 TTTAACTTGATACACTGCAGATTGAGAGTGTCTGAAGCTCTGCCTTGGCTTTCCGGTCATGGGTTCCA  
 GTTAATTATGCTCTCCATGGACCTATGGAGAGCAACAAGTTGATCTTAGTTAAGTCTCCCTATATGAGG  
 GATAAGTTCTGATTTTGTGTTTTTGTGTTACAAAAGAAAGCCCTCCCTGAACTTGCAGTA  
 AGGTGAGCTTCAGGACCTGTTCCAGTGGGCACTGTACTTGGATCTTCCCGCGTGTGTGCTTACACA  
 GGGGTGAAGTGTCTGCTGTTGATGATGAGGGTAAATGGTAGTTGAAAGGAGCAGGGGCCCTGGT  
 GTTGCATTTAGCCCTGGGGCATGGAGCTGAACAGTACTTGTGAGGATTGTTGTGGCTACTAGAGAACAA  
 GAGGGAAGTAGGGCAGAACTGGATACAGTTCTGAGCACAGCCAGACTTGTCTCAGGTGGCCCTGCACAG

FIGURE 1, sheet 93 of 94

GCTGCAGCTACCTAGGAACATTCTTGCAGACCCCGCATTGCCTTTGGGGGTGCCCTGGGATCCCTGGGG  
TAGTCCAGCTCTTATTCATTTCCCAGCGTGGCCCTGGTTGGAAGAAGCAGCTGTCAAGTTGTAGACAGCT  
GTGTTCTCTACAATTGGCCCAGCACCTGGGGCACGGGAGAAGGGTGGGGACCGTTGCTGTCTACTACTCAG  
GCTGACTGGGGCCTGGTCAGATTACGTATGCCCTTGGTGGTTTAGAGATAATCCAAAATCAGGGTTTGGT  
TTGGGGAAGAAAAATCTCCCCCTTCTCCCCCGCCCCGTCCCTACCGCTCCACTCCTGCCAGCTCATT  
TCCTTCAATTTCTTTGACCTATAGGCTAAAAAAGAAAGGCTCATTCCAGCCACAGGGCAGCCTCCCTG  
GGCCTTTGCTTCTCTAGCACAAATTATGGGTACTTCTTTTCTTAACAAAAAAGAAATGTTTGATTTCCT  
CTGGGTGACCTTATTGTCTGAATTGAAACCTTATTGAGAGGTGATGTCTGTGTAGCCAATGACCCAGG  
TAGCTGCTCGGGCTTCTTGGTATGTCTTGTGTTGAAAAGTGGATTTCAATCATTCTGATTGTCCAGT  
TAAGTGATCACCAAAGGACTGAGAATCTGGGAGGGCAAAAAAAAAAAAAAGTTTTATGTGCACTTAA  
ATTTGGGGACAAATTTATGTATCTGTGTTAAGGATATGCTTAAGAACATAATCTTTTGTGCTGTTGT  
TTAAGAAGCACCTTAGTTTGTGTTAAGAAGCACCTTATATAGTATAATATATATTTTTTGAATTACATT  
GCTTGTTTATCAGACAATTGAATGTAGTAATTCCTGTTCTGGATTAAATTTGACTGGGTAAACATGCAAAA  
ACCAAGGAAAAATATTTAGTTTTTTTTTTTTTTTTTGTATACTTTCAAGCTACCTTGTATGTATACAG  
TCATTTATGCCCTAAAGCCTGGTGATTATTCATTTAAATGAAGATCACATTTTCATATCAACTTTGTATCC  
ACAGTAGACAAAATAGCACTAATCCAGATGCCTATTGTTGGATATTGAATGACAGACAATCTTATGTAGC  
AAAGATTATGCTGAAAAGGAAAAATTTATCAGGGCAGCTAATTTGCTTTTACCAAAATATCAGTAGTAA  
TATTTTTGGACAGTAGCTAATGGGTCAGTGGGTCTTTTTAATGTTTATACTTAGATTTCTTTTTAAAAA  
AATTAATAATAAACAAAAAAATTTCTAGGACTAGACGATGTAATACCAGCTAAAGCCAAACAATTATAC  
AGTGAAGGTTTTACATTATTCATCCAATGTGTTCTATTCTGTTAAGATACTACTACATTTGAAGTGG  
GCAGAGAACATCAGATGATTGAAATGTTTCGCCCAGGGGTCTCCAGCAACTTTGAAATCTCTTTGTATTT  
TTACTTGAAGTGCCACTAATGGACAGCAGATATTTCTGGCTGATGTTGGTATTGGGTGTAGGAACATGA  
TTTTAAAAAAAACCTCTTGCTCTGCTTTCCCCCACTCTGAGGCAAGTTAAATGTAAAGATGTGATTT  
ATCTGGGGGGCTCAGGTATGGTGGGGAAGTGGATTGAGGAATCTGGGGAATGGCAAAATATATTAAGAAGA  
GTATTGAAAGTATTTGGAGGAAAAATGGTTAATCTGGGTGTGCACCAAGGTTGAGTAGAGTCCACTTCTG  
CCCTGGAGACCACAAATCACTAGCTCCATTTACAGCCATTTCTAAAAATGGCAGCTTCAGTTCTAGAGAA  
GAAAGAACAAACATCAGCAGTAAAGTCCATGGAATAGCTAGTGGTCTGTGTTTTCTTTTCGCCATTGCCTAG  
CTTGCCGTAATGATTCTATAATGCCATCATGCAGCAATTATGAGAGGCTAGGTCATCCAAAGAGAAGACC  
CTATCAATGTAGGTTGCAAAATCTAACCCTAAGGAAGTGCAGTCTTTGATTGTGATTCCCTAGTAACCT  
TGCAGATATGTTAACCAAGCCATAGCCCATGCTTTTTGAGGGCTGAACAAATAAGGGACTTACTGATAA  
TTTACTTTTTGATCACATTAAGGTGTCTCACCTTGAAATCTTATACACTGAAATGGCCATTGATTTAGGC  
CACTGGCTTAGAGTACTCCTTCCCTGCATGACACTGATTACAAATACTTTCTATTTCATACTTTCCAAT  
TATGAGATGGACTGTGGGTACTGGGAGTGATCACTAACACCATAGTAATGTCTAATATTCACAGGCAGAT  
CTGCTTGGGGAAGCTAGTTATGTGAAAGGCAATAAAGTCATACAGTAGCTCAAAAGGCAACCATAATTC  
TCTTTGGTGCAAGTCTTGGGAGCGTGATCTAGATTACACTGCACCATTCCCAAGTTAATCCCTGAAAAC  
TTACTCTCAACTGGAGCAATGAACCTTTGGTCCCAATATCCATCTTTTCAGTAGCGTTAATTATGCTCT  
GTTTCCAACCTGCATTTCCTTTCCAATTGAATTAAAGTGTGGCCTCGTTTTAGTCATTTAAATTTGTTTT  
CTAAGTAATGTCTGCCTCTATTATGGCACTTCAATTTTGCACTGTCTTTTGAGATTCAAGAAAAATTTCT  
ATTCATTTTTTTGTCATCCAATTGTGCTGAACTTTTAAATATGTAAATGCTGCCATGTTCCAAACCCAT  
CGTCAGTGTGTGTTTAGAGCTGTGCACCCTAGAAACAACATACTTGTCCCATGAGCAGGTGCCCTGAGA  
CACAGACCCCTTTGCATTACAGAGAGGTCATTGGTTATAGAGACTTGAATTAATAAGTGACATTATGCC  
AGTTTTCTGTCTCTCACAGGTGATAACAATGCTTTTTGTGCACTACATACTCTTCAGTGTAGAGCTCTT  
GTTTTATGGGAAAAGGCTCAAATGCCAAATTTGTTTTGATGGATTAATATGCCCTTTTGCCGATGCATAC  
TATTACTGATGTGACTCGGTTTTGTGCGAGCTTTGCTTTGTTTAAATGAAACACACTTGTAACCTCTTTT  
GCACCTTGAAAAGAAATCCAGCGGATGCTCGAGCACCTGTAACAATTTTCTCAACCTATTTGATGTTT  
AAATAAGAATTAACCT

FIGURE 1, sheet 94 of 94

SNP Position	Reference Sequence & SNP Position Number <sup>1</sup>	Nucleotide Change	AA Change	Frequency in Liverpool		Number of individuals with a change in heterozygosity <sup>2</sup>	Number of individuals with a loss in heterozygosity <sup>3</sup>	In which Populations observed <sup>4</sup>
				Blood.	Tumor			
Exon 1A *	170035	C to A (ACTT <u>G</u> CTCCCG)	None (5'-UTR)	0/84 0%	0/92 0%	0	0	3(C)
Exon 1A	170068	G to T (CGCAGGCTCC)	None (5'-UTR)	1/88 1%	1/94 1%	0	0	2
Exon 1A	170256	T to C (GCATCTGGGAT)	Silent (Ser-Ser)	45/90 50%	52/94 55%	6	0	2, 3(all), 6
Exon 1A	170368	A to G (GCAGCAAGCCCC)	Lys-Glu	1/92 1%	1/96 1%	0	0	2, 3(A)
Exon 1A	170487	G to C (GCTGCGGCGTT)	Silent (Ala-Ala)	7/90 8%	12/94 13%	4	0	2, 3(N,C,A), 6
Exon 1B	169812	C to G (AGCAGCGACGA)	None (5'-UTR)	1/96 1%	1/96 1%	0	0	2, 3(A,S)
Exon 1B	169823	A to G (CAAGTAAAGTA)	None (5'-UTR)	1/96 1%	1/96 1%	0	0	2
Intron 1D	167950	C to G (CTTCCCGAATC)	None (-59 promoter)	2/96 2%	2/96 2%	0	0	2
Intron 1D	167989	T to G (CACACTCTCTC)	None (-20 promoter)	15/118 13.6%	14/116 12.1%	3	0	2, 3(all)
Exon 1C	168054	C to G (TCTCAGCTCTCT)	None (5'-UTR)	1/96 1%	1/96 1%	0	0	2
Intron 1E	64331	A to G (TCCGTAAATTG)	None (+ 42 intron)	35/96 36%	36/96 38%	4	0	2, 3(N,I,A,S)
Exon 1F	52901	G to A (CTATAGCATAA)	None (5'-UTR)	0/74 0%	0/78 0%	0	0	3(A)
Exon 1F	52877	C to A (CCATGCTCCTT)	None (5'-UTR)	2/72 3%	0/78 0%	0	0	2, 3(N)
Exon 1G 5' genomic *	18783	C to T (TGAGACGATTG)	None (-42 intron)	0/96 0%	0/96 0%	0	0	3 (A)
Exon 1G 5' genomic *	18937	A to C (GTTCCAAGCAG)	None (-4 intron)	0/96 0%	0/96 0%	0	0	3 (C)
Intron 1G *	19034	T to C (GAAGGTAAGTT)	None (+2 intron)	1/96 1%	0/96 0%	1	0	2
Intron 3	243187	T to C TTTTTCTTTT	None (+101 intron)	39/96 41%	36/96 38%	3	0	2, 3(all)

FIGURE 2a, sheet 1 of 4



SNP Position	Reference Sequence & SNP Position Number <sup>1</sup>	Nucleotide Change	AA Change	Frequency in Liverpool		Number of individuals with a change in heterozygosity <sup>2</sup>	Number of individuals with a loss in heterozygosity <sup>3</sup>	In which Populations observed <sup>4</sup>
				Blood.	Tumor			
Exon 3	243055	C to T CTCCGCAAATG	Silent (Arg-Arg)	2/96 2%	3/96 3%	1	0	2, 6
Exon 4	306292	G to A (AGCCCGCTCAT)	Silent (Pro-Pro)	1/96 1%	1/94 1%	0	0	2
Exon 4	306382	C to G (CCCCCATACT)	Silent (Pro-Pro)	17/96 18%	16/94 17%	4	0	2, 3(C,I,S),6
Exon 6 *	423067	T to C (TTGTGTGCCCTC)	Cys-Arg	0/96 0%	0/96 0%	0	0	3(N)
Intron 6	423149	T to G (TTGTAATTTTC)	None (+52 intron)	11/96 11%	12/96 13%	0	0	2, 3(N,C,I,A)
Intron 6	423163	A to G (CAGATACGATC)	None (+66 intron)	10/96 10%	10/96 10%	1	0	2, 3(N,C,I,A)
Intron 6	423220	G to A (CACACGTTTAA)	None (+123 intron)	29/96 30%	29/96 30%	3	1	2, 3(N,C,I,A)
Intron 6	423232	C to G (AATAACCTACC)	None (+135 intron)	2/96 2%	2/96 2%	0	0	2
Intron 6	423258	A to G (TTATAAAGGTA)	None (+161 intron)	12/84 13%	11/96 12%	0	0	2, 3(N,C,I,A)
Intron 8	459706	G to C (TTCCCGCTGCC)	None (-994 intron)	seq in	Coriell only	n/a	n/a	3(I)
Intron 8	459832	G to A (TGCACGTGTGT)	None (-868 intron)	seq in	Coriell only	n/a	n/a	3(S)
Intron 8	459913	A to G (AAAACAGAACG)	None (-787 intron)	seq in	Coriell only	n/a	n/a	3(N,I)
Intron 8	460024	C to G (TTCATCCCAGC)	None (-676 intron)	seq in	Coriell only	n/a	n/a	3(all)
Intron 8	460056	C to T (GTCCCCTAAGT)	None (-644 intron)	seq in	Coriell only	n/a	n/a	3(I)
Intron 8 *	460159	A to G (CATGGATGGAA)	None (-541 intron)	seq in	Coriell only	n/a	n/a	3(S)
Intron 8	460553	T to C (CAGCTTCCATC)	None (-147 intron)	2/82 2%	4/92 4%	0	0	2, 3(I)
Intron 8	460564	G to A (CTAAAGTGGGT)	None (-136 intron)	82/82 0%	91/92 1%	1	0	2
Exon 8	460929	A to G (GCCACAGTCTG)	Silent (Thr-Thr)	76/96 80%	83/96 86%	3	0	1, 2, 3(all), 5, 6

FIGURE 2a, sheet 2 of 4

SNP Position	Reference Sequence & SNP Position Number <sup>1</sup>	Nucleotide Change	AA Change	Frequency in Liverpool		Number of individuals with a change in heterozygosity <sup>2</sup>	Number of individuals with a loss in heterozygosity <sup>3</sup>	In which Populations observed <sup>4</sup>
				Blood.	Tumor			
Exon 8	461199	T to C (GAGGATTC <del>CCCG</del> )	None (3'-UTR)	1/88 1%	1/94 1%	0	0	2
Exon 8	461231	A to G (AGTCTATGGGT)	None (3'-UTR)	1/90 1%	1/94 1%	0	0	2
Exon 8	461337	A to C (CTAAGAAATAAG)	None (3'-UTR)	0/90 0%	0/94 0%	0	0	3(A)
Exon 8	461520	G to C (ATTCCGCCTAT)	None (3'-UTR)	3/92 3%	3/96 3%	0	0	2
Exon 8	461843	G to A CCGGCGTGTGT	None (3'-UTR)	1/90 1%	1/96 1%	0	0	2
Exon 8	461968	T to C (AGTACTTGTGC)	None (3'-UTR)	43/89 48%	46/94 49%	3	2	2, 3(all)
Exon 8	462125	C to T (GGTGCCTGGG)	None (3'-UTR)	0/92 0%	0/94 0%	0	0	3(A)
Exon 8 *	462398	G to A (CTACCGCCTCC)	None (3'-UTR)	0/84 0%	0/94 0%	0	0	3(A)
Exon 8	462683	C to A (TCATTCA <del>TTTC</del> )	None (3'-UTR)	3/92 3%	5/96 5%	2	1	2, 3(L,A,S)
Exon 8	462949	T to G (TGTTCTGGATT)	None (3'-UTR)	0/82 0%	0/96 0%	0	0	3(A,S)
Exon 8	463958	T to C (TTGCCCTAGCTT)	None (3'-UTR)	5/80 6%	4/90 4%	1	0	2, 3(N)
Exon 8	463966	C to T (CTTGCCCGTAAT)	None (3'-UTR)	1/82 1%	1/90 1%	0	0	2, 3(N)
Exon 8	464237	G to A (GCCTCGTTTTT)	None (3'-UTR)	2/90 2%	2/94 2%	0	0	2
Exon 8	464735	A to T (TATTCATTTTT)	None (3'-UTR)	9/90 10%	4/96 4%	1	0	2, 3(N,C,I,A)
Exon 8 *	465074	T to C GCCGATGCATA	None (3'-UTR)	0/84 0%	0/94 0%	0	0	3(N,C,I,A)
Exon 8	AL078582 (54404)	A to G (ATCAAAAGTGGT)	None (3'-flanking)	20/78 26%	23/88 26%	5	2	2, 3(N,C,I,A)
Exon 8	AL078582 (54460)	C to A CTCACCTCACT	None(3'- flanking)	3/76 4%	2/76 3%	0	0	2, 3(C,I,N)

FIGURE 2a, sheet 3 of 4

- \* SNPs in Liverpool clinical tissue samples. Seen only one time and may represent sequencing artifacts. They are not included in the total counts of SNPs.
- 1. The SNP position number in the parenthesis is based on the beginning of each exon as 1. For SNPs within the introns, - sign was used for the ones in upstream introns and + sign for downstream introns referring the first base of the intron adjacent to the exon as 1.
- 2. For some heterozygosity calculations, individuals 47 and 48 were excluded because it is believed that the blood or the tumor sample was switched. These excluded cases were t=when both individuals showed a change in heterozygosity.
- 3. Loss of heterozygosity calculation includes any case where a heterozygous blood genotype became a homozygous genotype of the minor allele in the same individual's tumor sample. A change from a homozygous genotype of the major allele in the blood sample into a homozygous genotype of the minor allele in the tumor sample would also be counted
- 4. Code is as follows
  - 1: SNP discovered in cDNA SNP project
  - 2: SNP discovered in Liverpool DNA
  - 3: SNP discovered in Coriell (N=Northern European, C=Chinese, I=Indo-Pakistani, A=African American, S=Southwestern Native American)
  - 4: SNP discovered in CEPH
  - 5: Roodi N., Bailey R., Kao W. Y., Verrier C., Yee C., Dupont W., and Parl F. F. J. Natl. Cancer Inst. 87 (1995) 446-451.
  - 6: Parl, Fritz, Estrogens, Estrogen Receptor and Breast Cancer, IOS Press: Amsterdam, 2000.

Andersen TI et al. Human Mutation (1997) 9:531-536 : G to T at 838 of x03635

FIGURE 2a, sheet 4 of 4

SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Coriell Frequencies					Liverpool Frequencies		
				N.Eur	Chi	In-Pk	Af/Am	SW-NA	Blood	Tumor	
Exon 1A *	170035	C to A ACTTGCTCCGT	None (5'UTR)	0/20 0%	1/20 5%	0/20 0%	0/18 0%	0/20 0%	0/84 0%	0/92 0%	
Exon 1A	170068	G to T CGCAGGCTCCC	None (5'UTR)	0/20 0%	0/20 0%	0/20 0%	0/18 0%	0/20 0%	1/88 1%	1/94 1%	
Exon 1A	170256	T to C (GCATCTGGGAT)	Silent (Ser-Ser)	11/20 55%	10/20 50%	10/20 50%	9/18 50%	5/20 25%	45/90 50%	52/94 55%	
Exon 1A	170368	A to G GCAGCAAGCCC	Lys-Glu	0/20 0%	0/20 0%	0/20 0%	0/18 0%	0/20 0%	1/92 1%	1/96 1%	
Exon 1A	170487	G to C (GCTGCCGGCGTT)	Silent (Ala-Ala)	2/20 10%	1/20 5%	0/20 0%	1/18 6%	0/20 0%	7/90 8%	12/94 13%	
Exon 1B	169812	C to G (AGCAGCGACGA)	None (5'UTR)	0/20 0%	0/20 0%	0/20 0%	2/20 10%	4/20 20%	1/96 1%	1/96 1%	
Exon 1B	169823	A to G (CAAGTCAGTG)	None (5'UTR)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	1/96 1%	1/96 1%	
Intron 1D	167950	C to G (CTTCCCGAATC)	None (-59 promoter)	0/16 0%	0/20 0%	0/20 0%	0/18 0%	0/18 0%	2/96 2%	2/96 2%	
Intron 1D	167989	T to G (CACACTCTCTC)	None (-20 promoter)	1/18 5%	5/20 25%	5/20 25%	7/18 39%	5/18 28%	15/96 17%	16/96 17%	
Exon 1C	168054	C to G (TCTCACTCTCT)	None (-6 promoter)	0/18 0%	0/20 0%	0/20 0%	0/18 0%	0/18 0%	1/96 1%	1/96 1%	
Intron 1E	64331	C to T (CAATTCACGGA)	None (+42 intron)	5/11 45%	0/16 0%	5/18 28%	4/18 22%	2/16 13%	35/96 36%	36/96 38%	
Exon 1F *	52901	C to T (TTATGCTATAG)	None (-44 promoter)	0/20 0%	0/20 0%	0/20 0%	1/18 6%	0/16 0%	0/74 0%	0/78 0%	
Exon 1F	52877	G to T (AAGGAGCATGG)	None (-68 promoter)	1/20 5%	0/20 0%	0/20 0%	0/18 0%	0/16 0%	2/72 3%	0/78 0%	
Exon 1G Promoter Region *	18783	C to T (TGAGACGATTG)	None (-42 intron)	0/20 0%	0/20 0%	0/20 0%	1/20 5%	0/20 0%	0/96 0%	0/96 0%	
Exon 1G Promoter Region *	18937	A to C (GTTCCAAGCAG)	None (-4 intron)	0/20 0%	1/20 5%	0/20 0%	0/20 0%	0/20 0%	0/96 0%	0/96 0%	
Intron 1G *	19034	T to C (GAAGGTAAGTT)	None (+2 intron)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	1/96 1%	0/96 0%	
Intron 3	243187	T to C TTTTTCTTTT	None (+101 intron)	12/18 67%	6/20 30%	5/20 25%	5/18 28%	2/16 13%	39/96 41%	36/96 38%	

FIGURE 2b, sheet 1 of 3

SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Coriell Frequencies					Liverpool Frequencies	
				N.Eur	Chi	In-Pk	Af/Am	SW-NA	Blood	Tumor
Exon 3	243055	C to T CTCCGCAAAATG	Silent (Arg-Arg)	0/18 0%	0/20 0%	2/20 10%	0/20 0%	0/18 0%	2/96 2%	3/96 3%
Exon 4	306292	G to A (AGCCCCGCTCAT)	Silent (Pro-Pro)	0/8 0%	0/14 0%	0/14 0%	0/2 0%	0/12 0%	1/96 1%	1/94 1%
Exon 4	306382	C to G CCCCCATACT	Silent (Pro-Pro)	0/8 0%	14/16 25%	14/16 25%	0/6 0%	2/13 15%	17/96 18%	16/94 17%
Exon 6 *	423067	T to C (TTGTGTGCCCTC)	Cys-Arg	1/20 5%	0/20 0%	0/20 0%	0/20 0%	0/16 0%	0/96 0%	0/96 0%
Intron 6	423149	T to G (TTGTATTTTTTC)	None (+52 intron)	3/20 15%	7/20 35%	2/18 11%	6/20 30%	0/16 0%	11/96 11%	12/96 13%
Intron 6	423163	A to G (CAGATACGATC)	None (+66 intron)	1/20 5%	6/20 30%	2/20 10%	3/20 15%	0/16 0%	10/96 10%	10/96 10%
Intron 6	423220	G to A (CACACGTTTITA)	None (+123 intron)	4/20 20%	5/20 25%	8/20 40%	7/20 35%	0/16 0%	29/96 30%	29/96 30%
Intron 6	423232	C to G (AATAACCTACC)	None (+135 intron)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/16 0%	2/96 2%	2/96 2%
Intron 6	423258	A to G (TTATAAAGGTA)	None (+161 intron)	3/20 15%	7/20 35%	3/20 15%	6/20 30%	0/16 0%	12/84 13%	11/96 12%
Intron 8	459706	G to C (TTCCCGCTGCC)	None (-994 intron)	16/16 100%	14/14 100%	20/20 100%	15/16 94%	5/5 100%	seq only	in Coriell
Intron 8	459832	G to A (TGCACGTGTGT)	None (-868 intron)	0/20 0%	0/18 0%	0/20 0%	0/16 0%	1/16 6%	seq only	in Coriell
Intron 8	459913	A to G (AAAACAGAACG)	None (-787 intron)	1/20 5%	0/18 0%	0/20 0%	1/16 6%	0/16 0%	seq only	in Coriell
Intron 8	460024	C to G (TTCATCCCAGC)	None (-676 intron)	6/20 30%	4/18 22%	5/18 28%	11/16 69%	4/12 33%	seq only	in Coriell
Intron 8 *	460056	C to T (CTAAGAATAAG)	None (-644 intron)	0/20 0%	0/18 0%	0/20 0%	1/16 6%	0/12 0%	seq only	in Coriell
Intron 8 *	460159	A to G (CATGGATGGAA)	None (-531 intron)	0/20 0%	0/18 0%	0/20 0%	0/14 0%	1/12 8%	seq only	in Coriell
Exon 8	460553	C to T (CAGCTCCCATC)	None (-147 intron)	0/16 0%	0/18 0%	1/20 5%	0/18 0%	0/20 0%	2/82 2%	4/92 4%
Exon 8	460564	G to A (CTAAAGTGGGT)	None (-136 intron)	16/16 100%	18/18 100%	18/18 100%	18/18 100%	20/20 100%	82/82 100%	91/92 99%
Exon 8	460929	A to G (GCCACAGTCTG)	Silent (Thr-Thr)	16/20 80%	17/20 85%	16/20 80%	16/20 80%	14/20 70%	76/96 80%	83/96 86%
Exon 8	461199	T to C (GAGGATTCCCCG)	None (3' UTR)	0/18 0%	0/18 0%	0/20 0%	0/18 0%	0/20 0%	1/88 1%	1/94 1%

FIGURE 2b, sheet 2 of 3

SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Coriell Frequencies					Liverpool Frequencies		
				N.Eur	Chi	In-Pk	AF/Am	SW-NA	Blood	Tumor	
Exon 8	461231	A to G (AGTCTATGGGT)	None (3'-UTR)	0/18 0%	0/18 0%	0/20 0%	0/18 0%	0/20 0%	1/90 1%	1/94 1%	
Exon 8	461337	A to C (CTAAGAATAAG)	None (3'-UTR)	0/18 0%	0/18 0%	0/20 0%	3/18 17%	0/20 0%	0/90 0%	0/94 0%	
Exon 8	461520	G to C (ATTCCGCCCTAT)	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	3/92 3%	3/96 3%	
Exon 8	461843	G to A CCGGCGTGTGT	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	1/90 1%	1/96 1%	
Exon 8	461968	T to C (AGTACTTGTGC)	None (3'-UTR)	9/20 45%	8/20 40%	13/20 60%	11/20 55%	7/20 35%	43/89 48%	46/94 49%	
Exon 8	462125	C to T (GGTGCCCTGGG)	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	2/20 10%	0/20 0%	0/92 0%	0/94 0%	
Exon 8 *	462398	G to A (CTACCGCCCTCC)	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	1/20 5%	0/20 0%	0/84 0%	0/94 0%	
Exon 8	462683	C to A (TCATTCAATTC)	None (3'-UTR)	0/20 0%	2/20 10%	1/20 5%	1/20 5%	7/20 35%	3/92 3%	5/96 5%	
Exon 8	462949	T to G (TGTTCTGGATT)	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	1/20 5%	1/20 5%	0/82 0%	0/96 0%	
Exon 8	463958	T to C (TTGCCTAGCTT)	None (3'-UTR)	2/20 10%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	5/80 6%	4/90 4%	
Exon 8	463966	C to T (CTTGCCGTAAT)	None (3'-UTR)	0/20 0%	0/20 0%	0/18 0%	0/16 0%	0/20 0%	1/82 1%	1/90 1%	
Exon 8	464237	G to A (GCCTCGTTTTT)	None (3'-UTR)	0/20 0%	0/20 0%	0/20 0%	0/20 0%	0/20 0%	2/90 2%	2/94 2%	
Exon 8	464735	A to T (TATTCATTTTT)	None (3'-UTR)	2/20 10%	2/20 10%	1/20 5%	0/20 0%	8/20 40%	9/90 10%	4/96 4%	
Exon 8 *	465074	T to C GCCGATGCATA	None (3'-UTR)	0/20 0%	1/20 5%	0/20 0%	0/20 0%	0/20 0%	0/84 0%	0/94 0%	
Exon 8	AL078582 (54404)	A to G (ATCAAAAGTGGT)	None (3'-flanking)	3/20 15%	2/18 22%	3/20 15%	1/14 7%	0/20 0%	20/78 26%	23/88 26%	
Exon 8	AL078582 (54460)	C to A CTCACCTCACT	None (3'-flanking)	0/18 0%	1/16 14%	1/18 6%	0/10 0%	7/20 35%	3/76 4%	2/76 3%	

\*. SNPs in Coriell Diversity panels. Seen only one time and may represent sequencing artifacts. They are not included in the total counts of SNPs.

FIGURE 2b, sheet 3 of 3

SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Liverpool Control Frequencies	Liverpool Frequencies	
					Blood	Tumor
Exon 1A	170035 (169)	C to A ACTTG <u>C</u> TCCGT	None (5'UTR)		0/84 0%	0/92 0%
Exon 1A	170068 (202)	G to T CGCAGG <u>G</u> CTCCC	None (5'UTR)		1/88 1%	1/94 1%
Exon 1A	170256 (390)	T to C (GCATCT <u>T</u> GGGAT)	Silent (Ser-Ser)		45/90 50%	52/94 55%
Exon 1A	170368 (502)	A to G GCAGC <u>A</u> AGCCC	Lys-Glu		1/92 1%	1/96 1%
Exon 1A	170487 (621)	G to C (GCTGCG <u>G</u> CGTT)	Silent (Ala-Ala)		15/120 12.5%	14/120 11.7%
Exon 1B	169812 (2589)	C to G (AGCAGC <u>G</u> ACGA)	None (5'-UTR)	3/180 2%	1/96 1%	1/96 1%
Exon 1B	169823 (2600)	A to G (CAAGT <u>C</u> AGTG)	None (5'-UTR)	0/180 0%	1/96 1%	1/96 1%
Intron 1D	167950 (741)	C to G (CTTCC <u>C</u> GAATC)	None (-39 promoter)	19/190 10%	2/96 2%	2/96 2%
Intron 1D	167989 (780)	T to G (CACAC <u>T</u> CTCTC)	None (-13 promoter)	12/114 10.5%	16/118 13.6%	14/116 12.1%
Exon 1C	168054 (844)	C to G (TCTCA <u>C</u> TCTCT)	None (5'-UTR)	0/192 0%	1/96 1%	1/96 1%
Intron 1E	64331 (56346)	C to T (CAATT <u>C</u> ACGGA)	None (+ 51 intron)		35/96 36%	36/96 38%
Exon 1F	52901 (67777)	C to T (TTATG <u>C</u> TATAG)	None (5'-UTR)		0/74 0%	0/78 0%
Exon 1F	52877 (67801)	G to T (AAGGAG <u>C</u> ATGG)	None (5'-UTR)		2/72 3%	0/78 0%
Exon 1G 5' genomic	18783 (18783)	C to T (TGAGAC <u>G</u> ATTG)	None (-158 intron)		0/96 0%	0/96 0%
Exon 1G 5' genomic	18937 (18937)	A to C (GTTCCAAGCAG)	None (-4 intron)		0/96 0%	0/96 0%
Intron 1G	19034 (19034)	T to C (GAAGGTAAGTT)	None (+2 intron)		1/96 1%	0/96 0%
Intron 3	243187 (1120+101)	T to C TTTTT <u>T</u> CTTTT	None (+101 intron)	40/158 25%	39/96 41%	36/96 38%
Exon 3	243055 (1089)	C to T CTCCG <u>C</u> AAATG	Silent (Arg-Arg)	11/184 6%	2/96 2%	3/96 3%
Exon 4	306292 (1245)	G to A (AGCCCGCTCAT)	Silent (Pro-Pro)		27/116 23.3%	24/116 21.4%
Exon 4	306382 (1335)	C to G CCCCC <u>C</u> ATACT	Silent (Pro-Pro)		17/96 18%	16/94 17%
Exon 6	423067 (1699)	T to C (TTGTG <u>T</u> GCCTC)	Cys-Arg	0/186 0%	0/96 0%	0/96 0%
Intron 6	423149 (1729+52)	T to G (TTGTATTTTTC)	None (+52 intron)	16/38 42%	11/96 11%	12/96 13%
Intron 6	423163 (1729+66)	A to G (CAGAT <u>A</u> CGATC)	None (+66 intron)	0/174 0%	10/96 10%	10/96 10%

FIGURE 2c, page 1 of 3



SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Liverpool Control Frequencies	Liverpool Frequencies	
					Blood	Tumor
Intron 6	423220 (1729+123)	G to A (CACAC <u>G</u> TTTTA)	None (+123 intron)	32/164 20%	29/96 30%	29/96 30%
Intron 6	423232 (1729+135)	C to G (AATAA <u>C</u> CTACC)	None (+135 intron)	1/156 0.6%	2/96 2%	2/96 2%
Intron 6	423258 (1729+161)	A to G (TTATAA <u>A</u> GGTA)	None (+161 intron)		12/84 13%	11/96 12%
Intron 7	459706 (1914-994)	G to C (TTCCCG <u>G</u> CTGCC)	None (-995 intron)		seq only	in Coriell
Intron 7	459832 (1914-868)	G to A (TGCAC <u>G</u> TGTGT)	None (-869 intron)		seq only	in Coriell
Intron 7	459913 (1914-787)	A to G (AAAACAGAAC <u>G</u> )	None (-787 intron)		seq only	in Coriell
Intron 7	460024 (1914-676)	C to G (TTCAT <u>C</u> CCAGC)	None (-677 intron)		seq only	in Coriell
Intron 7	460056 (1914-644)	C to T (CTAAGA <u>A</u> ATAAG)	None (-645 intron)		seq only	in Coriell
Intron 7	460159 (1914-531)	A to G (CATGG <u>A</u> TGGAA)	None (-542 intron)		seq only	in Coriell
Intron 7	460553 (1914-147)	C to T (CAGCT <u>C</u> CCATC)	None (-148 intron)		2/82 2%	4/92 4%
Intron 7	460564 (1914-136)	G to A (CTAAAGTGGG <u>T</u> )	None (-137 intron)	56/56 100%	82/82 100%	91/92 99%
Exon 8	460929 (2142)	A to G (GCCAC <u>A</u> GTCTG)	Silent (Thr-Thr)	83/100 83%	76/96 80%	83/96 86%
Exon 8	461199 (2412)	T to C (GAGGATTCCCG)	None (3'-UTR)	1/136 0.7%	1/88 1%	1/94 1%
Exon 8	461231 (2444)	A to G (AGTCTA <u>T</u> GGGT)	None (3'-UTR)	1/140 0.7%	1/90 1%	1/94 1%
Exon 8	461337 (2550)	A to C (CTAAGA <u>A</u> ATAAG)	None (3'-UTR)	1/128 0.8%	0/90 0%	0/94 0%
Exon 8	461520 (2733)	G to C (ATTCC <u>G</u> CCTAT)	None (3'-UTR)	1/111 0.9%	3/92 3%	3/96 3%
Exon 8	461843 (3056)	G to A (CCGGC <u>G</u> TGTGT)	None (3'-UTR)	0/130 0%	1/90 1%	1/96 1%
Exon 8	461968 (3181)	T to C (AGTACT <u>T</u> TGTGC)	None (3'-UTR)	58/126 46%	43/89 48%	46/94 49%
Exon 8	462125 (3338)	C to T (GGTGCC <u>C</u> TGGG)	None (3'-UTR)	0/104 0%	0/92 0%	0/94 0%
Exon 8	462398 (3611)	G to A (CTACCGCCTC <u>C</u> )	None (3'-UTR)		0/84 0%	0/94 0%
Exon 8	462683 (3896)	C to A (TCATT <u>C</u> ATTTC)	None (3'-UTR)		3/92 3%	5/96 5%
Exon 8	462949 (4162)	T to G (TGTTCTGG <u>A</u> TT)	None (3'-UTR)		0/82 0%	0/96 0%
Exon 8	463958 (5171)	T to C (TTGCC <u>T</u> AGCTT)	None (3'-UTR)		5/80 6%	4/90 4%
Exon 8	463966 (5179)	C to T (CTTGCCGTA <u>A</u> T)	None (3'-UTR)		1/82 1%	1/90 1%
Exon 8	464237 (5849)	G to A (GCCTCGT <u>T</u> TTT)	None (3'-UTR)		2/90 2%	2/94 2%

FIGURE 2c, page 2 of 3

SNP Position	Reference Sequence & SNP Position #	Nucleotide Change	AA Change	Liverpool Control Frequencies	Liverpool Frequencies	
					Blood	Tumor
Exon 8	464735 (5948)	A to T (TATTCATTTTT)	None (3'-UTR)		9/90 10%	4/96 4%
Exon 8	465074 (6287)	T to C GCCGATGCATA	None (3'-UTR)		0/84 0%	0/94 0%
3'-flanking Exon 8	AL078582 (54404)	A to G (ATCAAAGTGGT)	None (3'-flanking)	38/180 21%	20/78 26%	23/88 26%
3'-flanking Exon 8	AL078582 (54460)	C to A CTCACCTCACT	None(3'- flanking)	9/174 5%	3/76 4%	2/76 3%

(blank cells mean the controls have not been genotyped for that SNP)

# Figure 2d

## PCR primers

Exon	Primer Position	PCR Product Length (bp)	Forward Primer	Reverse Primer
1A	ER1ixAF-1, ER1ixAR-1	930	M13f-GCTCGTTCTCCAGGTAGTAGGGCA	M13r-GGGGCACATAAGGCAGCACA
1B	-161/ exon1B /+154	472	TGCAACCGCACACCCATTCTATCTG	GGGCTCCAACTTTAAGTACTGGTCTCC
1C	-227/ exon1C /+107	445	GGTTTCTCTCTCCCGAGTACAGCTTTC	AGAACAGCAATCCTCATCTCCCTGC
1D	-225/ exon1D /+123	444	TCTCAAAAGGGAGTGGCCGAAATGC	TACTGTGCTACGCCGACTTTCCTC
1E	-187/ exon1E /+163	472	AGCCAAACATTGATTCTTCAGTGCC	AAGCAACGCATGTAGAGTGCCTC
1F	-316/ exon 1F /+144	587	GCAAAATATCCTTGGAGCAGAAAAGAC	TTTCCAACTCCACATGCCCTGTC
1G	18711/ exon 1G / 19200	489	TTGGCCAAACATTTTCCCTCA	TCCACACGCCCTTGTCTTGGT
2	-170/ exon2 /+240	600	ATAGGCAACACCTTTTGCTGCAACAG	ATTGAGTCTTGCCAAAGGAAGGAAGC
3	exon 3	483	CACCTCAAGAAAGGACAGAAAAGGCA	TTAGAATTTCAGATTCCAGACACTTCCA
4	-156/ exon4 /+103	602	GCCACTTGTGTGAACACCTTACCG	CATGTGTATTGCGTTCTTTTCCCTCC
4?			GCCACTTGTGTGAACACTTACC	CATGTTATTGCTTCTTTTCCCTCC
5	-218/ exon5 /+194	553	TCTCCTTCCTTTTCCCTTTTACGC	GGAAATGAGGACTCATTGCAGGAC
6	-278/ exon6 /+94	502	CCATATTTAACATGGCAGACTTGAGGAC	GACATTAATGCTTTGGAGTGGGTAG
7	-195/ exon7 /+235	550	CAGAGCATCCCCAATTGCTAGACTACTG	AAGCGTAAGTATCGCTTCCCTCTATGCC
8	-76/ 501 exon8 /	577	TTCCCTTCTAGGGATTTCAGCAC	TCCCTCACGCTTAGTAACATAGCAAG
8.3	49579-51263	1684	AAAATGAAAAACACACGGCCATGA	CCACGCTGGGAAATGAAGAAAGA
8.17	52232-53728	1496	GCACTAATCCAGATGCCTATTGTTGG	GCCACACTTTTAATTCAATTGGAAAGG
8.18	53410-54908	1498	GAGATGGACTGTGGGTACTGGGAGT	AGGTAGCTCCAAAAAGGGAAGGAGT
8.25	51167-52387	1220	AGCTACCTAGGAACATTCTTTCAGACC	TCCAAACAATAGGCATCTGGATTAGTGCT

## Figure 2e

Sequencing Primers (Unless indicated, PCR primers were used as sequencing primers)

Exon	Primer Name	
Exon 1A	M13f	TGTAACACGACGGCCAGT
Exon 1A	M13r	CAGGAACACAGCTATGACC
Exon 1A	ER1sq1Af.2	CTCCAGCACCTTTGTAAT
Exon 1G	ER1Gsf1_18720	CAGTATTGGCCACACATTTTC
Exon 1G	ER1Gsr1_19198	TGGTATCACCTTTTGAGACA
Exon 8.3	E1.8_49979	AAAGTATTACATCACGGGGG
Exon 8.3	E1.8_50379	TGGAGAGTAGACATTTTGCC
Exon 8.3	E1.8_50806	AGGATAAGTTCTCTGATTTTG
Exon 8.17	ER1x8.17sf1_52232	GCACTAATCCAGATGCCTAT
Exon 8.17	ER1x8.17sf2_52684	TTGGTATTGGGTAGGAAC
Exon 8.17	ER1x8.17sf3_53160	GGAAGTGAGTCTTTGATTT
Exon 8.17	ER1x8.17sr1_53702	AAATGCAGTTGGAACACAGAG
Exon 8.17	ER1x8.17sr2_53258	AAGTCCCTTATTGTTTCAGC
Exon 8.17	ER1x8.17sr3_52784	CCCCAGATAAATCACATCTT
Exon 8.18	ER1x8.18sf1_43410	GAGATGGACTGTGGGTACTG
Exon 8.18	ER1x8.18sf2_54033	GCCAGTTTCTGTTCTCTCAC
Exon 8.18	ER1x8.18sf3_54443	CTAAAGCCTCTCCTCACCTC
Exon 8.18	ER1x8.18sr1_54906	GTAGCTCCAAAAGGGAAG
Exon 8.18	ER1x8.18sr2_54379	ACTGCTAGCAAGAAGTGGAG
Exon 8.18	ER1x8.18sr3_54048	GAGAACAGAAACTGGCATAA
Exon 8.25	ER1x8.25sf1_51173	CTAGGAACATTCCTTGCAGA
Exon 8.25	ER1x8.25sf3_51929	CTGTTTGTTTAAGAAGCACCT
Exon 8.25	ER1x8.25sr2_51945	GCTTCTTAAACAAACAGCAAC
Exon 8.25	ER1x8.25sr3_51565	TGGAATGAGCCTTCTTTT
Exon 8.25	ER1x8.23r_52258	TCCAAACAATAGGCATCTGGATTAGTGCT
Exon 8.25	ER1x8.25sf4_51860	CACCTAAATTTGGGACAAT
Exon 8.25	ER1x8.25sr4_52072	GCATGTTAACCCAGTCAAAAT

(SEQ ID NO:2)

Figure 3: Amino Acid Sequence for the Estrogen Receptor Alpha

```
1  mtmtlhtkas gmallhqi qg neleplnrpq lkiplerplg evyldsskpa vynypegaay
61 efnaaaaaana qvygqgtglpy gpgseaaaafg snglggfppl nsvsp splml lhpppq lspf
121 lqphgqqvpy ylenepsgyt vreagppafy rpnsdnrrqg grerlastnd kgsmamesak
181 etrycavcnd yasgyhygvw scegckaffk rsiqghndym cpatnqctid knrrkscqac
241 rlrkcyevgm mkggirkdrr ggrmlkhhkrq rddgegrgev gsagdmraan lwpsplmikr
301 skknsllsl tadqmv sll daeppilyse ydptrpfsea smmglltnla drelvhminw
361 akrvp gfvdl tlhdqvhll e cawleilmig lvwrsmehpv kllfapnlll drnggkcveg
421 mveifdmla tssrfrmmnl qgeefvclks iillnsgvyt flsstlksle ekdhihrvld
481 kitdtlihl akagltlqqq hqrlaqllli lshirhmsnk gmehlysmkc knvvp lydll
541 lemldahrlh aptsr ggasv eetdqshlat agstssshlq kyyitgeaeg fpatv
```

FIGURE 3

## Haplotype analysis of Estrogen receptor alpha.

Liverpool samples are from 48 patients, and each patient had a tumor and blood sample typed. Coriell samples were controls, but they were not matched controls. Rather they included a mix of Europeans, Chinese, Indo-Pakistani, and African Americans.

TITLE: ESRI data from Coriell controls

#1-4  
CGCAGCACTCTCGCATNNNNNTGAACACAGTAACGTCGCTTCGTTACCGACCA  
#2-12  
CGTAGCACTCNCGCATTTCGCTGAGCACAGTAACGTCGCTTCGTTGNCGACCA  
#3  
AGTAGCACTCNCGCATTTCGCTGAGCACAGTAACGTCGCTTCGTTGNCGACCA  
#4-4  
CGTAGCACTCCCGCATTTCGGTGAGCACAGTAACGCCGCTTCGTTGCCGACCA  
#5-3  
CGTAGCACTCCCGCATTTCGGTGAGCACAGTAACGCCGCTTCGTTGCCGAGCA  
#6-2  
CGTAGCACTCCCGCATTTCGGTGAGCACAGTAACGTCGATTTCGATGANGACCA  
#7  
CGTAGCACTCCCGCATTTCGGTGAGCACATAACGTCGATTTCGATGANGACCA  
#8-3  
CGTAGCACGCNCGCATTTCGCTGAGCACAGTAACGTCGCTTCGTTGNCGANCA  
#9  
CGTAGGACGCTCGCATCCNNTGAGCACAGTAACGCCGCTTCGTTNNNNNNNN  
#10-4  
CGCAGCACTCNCGCATCCNNTGAGCACAGTAACGTCGCTTCGTTACCGACCA  
#11  
CGTAGCACTCNCGCATTTCNNTGACGCAGTAACGTCGCTTCGTTGCCGACCA  
#12-2  
CGTAGCANTCNCGCATCCGCTTAACGCAGTAACGCCGCTTCGTTGNNGAGCA  
#13  
CGCAGCACGCCCGCATTTCGGTGAACACAGTAACGCCGATTTCGATGACGAGCA  
#14  
CGTAGCACTCCCGCATTTCNNTGAACACAATACGCCGCGTCGTTGNCGAGCA  
#15  
CGTAGCACTCCNNCATTTCNCTGAGCACAGTAACGTCGAGTCGATGCCGAGCG  
#16  
CGTAGCANNCCGCATTTCGCTGAGCACATAACGCCGATTTCGATGANGACCA  
#17  
CGTAGGACTCCCGCATTTCGCTGAGCACAGTAACGTCGATTTCGATGANGAGCA  
#18  
CGTAGCACTCCCGCATCCNNTGAGCACATAACGCCGATTTCGATGANGANN  
#19-8  
CGTAGCACTCNCGCATNNNNNNNNNNCAATAACGCCGCTTCGTTGCNNNNNN  
#20-6  
CGCAGCACGCNCGCATNNNNNNNNNNCAGTAACGCCGCTTCGTTGCNNNNNN  
#21  
CGTAGCACTCNCGCATCCNNTTAGCGCAATAACGCCGCTTCGTTGCNGGCCA  
#22  
CGCAGCACTCCCGCATTTCGCTTGGCGNNGNNCGCCGCTTCGTTGCCGACCA  
#23  
CGCAGCACGCCCGCATCCNNTGAACATAATAACGCCGCTTCGTTGCCGAGCA  
#24  
CGCAGCACGCCCGTATTTCNNTGAGCACATAACGCCGCTTCGTTGNCGAGCA  
#25  
CGCAGCANNCCGCATCCNNTGAACACAGTAACGCCGCTTCGTTGCCGAGCA  
#26  
CGCAGCACGCTCGCATCCNNTGAGCACAGTAACGTCGCTTCGATGANGANN  
#27  
CGCAGCACTCCNNCATTTCNNTTAACGCAGTACCGTTGCTTNGTTNNCGAGCN

#28  
 CGCACCCTCCCGCATTGCTGACGAGTACCGTCAATTGTTGCCGAGCA  
 #29  
 CGCACCACGCCCCGCATCCGCTGAACACAGTAACGTCGCTTCGTTNNNNNNNN  
 #30  
 CGTAGCACTCTCGCATCTGCTNAGCGCAGTAACGTCGCTTCGTTGCCGACCA  
 #31  
 CGCAGCACTCCCGCATNCNNTGAGCACAGTAACGCCGCTTCGTTGCCGAGCA  
 #32  
 CGCAGCACTCCCGCATTGCTGAGCACATAACGCCGCTTCGTTGCCGACCA  
 #33  
 CGCACCANNCCGCATCCGCTGAGCANNNGNNCGTCGCTTCGTTGCCGAGCA  
 #34-2  
 CGCAGCACTCTCGCATCCGCTGAGCACAGTAACGCCGCTTCGTTGCCGAGCA  
 #35  
 CGTAGCACTCCCGCATCCNNTTGGCGCAGTAACGTCGATTGACGACGAGCA  
 #36-3  
 CGTAGCACTCCCGCATTGCTGAACACAGTAACGCCGCTTCGTTGNCGACCA  
 #37  
 CGCAGCACGCCCCGCATTGCTGAACACAGTAACGCCGCTTCGTTGCCGACCA  
 #38  
 CGCAGCACGCCCCGCATTGCTGAACACATAACGCCGCTTCGTTGCNNNNNN  
 #39  
 CGCAGGACGCCCCGCATTGCTGAGCACAGTAACGCCGCTTCGTTGCNAAGCA  
 #40  
 CGCAGCACTCCCGCATTGCTGAACACATAACGTCGCTTCGTTACCGAGCA  
 #41  
 CGCAGCACTCNCGCATTGCTGAACACAGTAACGTCGCTTCGTTGCNGAGCA  
 #42  
 CGCAGCACTCCCGCATTGCTGCGCAATAACGTCGCTTCGTTGCCGACCA  
 #43  
 NNNNNGACTCCTGCATTGCTTGGCGNNGNNCGTTGCTTCGTTNCCGAGCA  
 #44  
 CGTAGCACTCNCGCATTGCTGAGCAGTAACGTCGCTTCGTTGCCGAGCA  
 #45  
 CGCAGCACTCCCTCATTGCTGAGCACAGTAACGCCGCTTCGTTGCCGACCA  
 #46  
 CGCAGCACTCTCGCATTCGCTGAACACAGTAACGTCGCTTCGTTGCCGAGCA  
 #47  
 CGTAGCACTCCCGCATTGCTGAGCACAGTAACGCCGCTTCGTTGCCGAGCA  
 #48  
 CGCAGCACTCCCGCATTGCTGAGCACNGTAACGTCGATTGATGACGACCA  
 #49  
 CGCAGCACGCCCCGCATTGCTGAGCACNGTAACGTCGCTTCGTTACCGACCA  
 #50  
 CGCAGCACTCCCGCATCCNNTGAGCANNNGTAACGTCGCTTCGTTGCCGACCA  
 #51  
 CGCAGCACTCCCGCATCCNNTGAGCANNNGTAACGCCGCTTCGTTGCCGAGCA  
 #52  
 CGCAGGACGCCNNCATTGCTGAGCACAGTAACGCCGCTTCGTTGCCGACCA  
 #53  
 CGCAGGACGCCNNCATTGCTGAGCACATAACGTCGCTTCGTTGCCGAGCA

FIGURE 4a, sheet 2 of 6



TITLE: ESR1LVR data - tumors in Liverpool  
 #1-6  
 CGCAGCACTCTCGCATCCGCTGAACATGGTAACGCCGCTTCGTTGC  
 #2-7  
 CGCAGCACTCTCGCATCCGCTGAACACGGTAACGTCGCTTCGTTGC  
 #3-31  
 CGTAGCACTCCCGCATCCGCTGAGCACGGTAACGTCGCTTCGTNNN  
 #4-7  
 CGCAGCACTCTCGCATCCGCTGAACACGGTAACGTCGCTTCGTTAC  
 #5-2  
 CGCAGCACTCTNNCATTCCGGTGAGCACGGTAACGTCGCTTCGTTGC  
 #6  
 CGCAGCACTCTNNCATTCCGGTGAGGACGGTAACGTCGCTTCGTTGC  
 #7-2  
 CGCAGCACTCTCGCATTCCGCTGAACACGGTAACGTCGATTTCGTTGC  
 #8  
 CGCAGCACTCTCGCATTCCGCTGAACACGGTAACGTCGATTTCGTTAC  
 #9-5  
 NGTAGCACTCTCGCATCCGCTGAACANNNGNAACNNNNNNNNNNNN  
 #10-2  
 NNCAGCACTCCCGCATTCCGGTGAGCACGATAACGCCGCTTCGTTGC  
 #11  
 NNTANCACTCTNNCATTCCGCTGAGCANNATAACGTCGCTTCGTTNN  
 #12-5  
 CGTAGCACTCTCGCATCCGCTGAGCANNGTAAACGNCGCTNNNNNNNN  
 #13  
 CGCAGCACTCCCGCATTCCGCTGAGCACGACAAGGCCGCTTCGTTGC  
 #14-3  
 CGTAGCACTCTCGCATCCGCTGAGCACGATAACGCCGCTTCGTTGC  
 #15  
 CGCAGCACTCCNNCATTCCGCTGAGCACGACAAGGCCGCTTCGTTGC  
 #16  
 CGTAGCACTCCCGCATCCGCTGAACACGGTAACGCCGCTTCGTTAC  
 #17  
 CGCAGCACGCTCGCACTCGCTGAACACGGTAACGCCGCTCCGATGC  
 #18  
 CGCAGCACTCTNNCATTTCAGTTGGCGCGGTAACGCCGATTTCGATGA  
 #19  
 CGCACCACGCCCCGATTCCGCTGAAGACGGTAACGCCGCTTCGTTAC  
 #20-7  
 CGCAGCACTCCCGCATCCGCTGAGCACGGTAACGTCGCTTCGTTAC  
 #21  
 CGTAGCACTCCCGCATTCCGCTGGCGCGANNNGCCGCTTCGTTGC  
 #22  
 NNNANCACTCTCGCATCCGCTGAGCACGGTAACGTCGATNNNGATAA  
 #23  
 CGTAGCACTCTCGCATCCGCTGAGCACGATAACGCCGCTCCGTTGC  
 #24-2  
 CGTAGCACTCCNNCATTCCGCTGAACACGATAACGNCGCTTCGTTAN  
 #25  
 CGCAGCACTCTCGCATCCGCTGAGCACGATAACGCCNCTCCGATGC  
 #26  
 CGCAGCACTCCCGCATTCCGGTGAGCACGGTAACGTCGATTTCGTTAC  
 #27  
 CGCAGCACTCCCGCATCCGCTGAACATGGTGACGCCGCTTCGTTAN  
 #28-5  
 CGCAGCACTCCCGCATTCCGCTGAACACGGTAACGTCGCTTCGTTNN  
 #29  
 CGCAGCACTCTCGCATTCCGGTGAACACGGTAACGTCGCTTCGTTAC  
 #30  
 CGCAGCACTCTCGCATTTCAGTTGGCGCGGTAACGCCNCNTTCGATGA  
 #31  
 NNNNNCACGCCCCGATTCCGCTGAAGACGGTAACGCCGCTTCGTTAC

FIGURE 4a, sheet 3 of 6

#32  
 CGCAGCACTCCCGCATTCGGTTGGCGCGGTAACGTCGCTCCGATAC  
 #33  
 CGTAGCACTCCCGCATTCGCTTGGCGCGATAACGCCGCTTCGTTGC  
 #34  
 NNNAGCACTCTNNCATTCGCTGAGCANNNGNNNNNCGATNNGTNNN  
 #35  
 CGTAGCACTCTCGCATCCGCTGAGCACGATAACGCCGCTCCGATGC  
 #36  
 CGTAGCACTCCCGCATTCGCTGAACACGATAACGCCGCTTCGTTAC  
 #37  
 CGCAGCACTCTCGCATCCGGTGAGCACGATAACGTCGCTCCGATGC  
 #38  
 CGCAGCACTCCCGCATTCGGTGAGCACGGTAACGTCGATTCGATAA  
 #39  
 CGCAGCACTCCCGCATCCGCTGAACATGGTGACGCCGCTTCGTTGC  
 #40  
 CGTACCACGCCCCGATCCGCTGAGCACGATAACGCCNCGTNNN  
 #41  
 CGCAGCACTCCCGCATTCGCTGAACACGGTAACGTCGCTTCGTTAC  
 #42  
 CGTAGCACGCTCGCATCCGCTGAGCACGATAACGCCGCTTCGTTGC  
 #43  
 CGTAGCACTCTCGCATCCGCTGAGCACGGTAACGTCGCTTCGTTAC  
 #44  
 CGTAGCACTCCCGCATTCGGTGAGGACGATAACGCCGCTTCGTTGC  
 #45-2  
 CGTAGCACTCCCGCATTCGCTGAACACGGTAACGTCGCTTCGATAA  
 #46-5  
 CGCAGCACTCCCGCATCCGCTGAACACGGTAACGCCGCTTCGTTGN  
 #47-3  
 CGTAGCACTCCCGCATCCGCTGAACACGATAACGCCGCTTCGTTGC  
 #48  
 CGCACCACGCCCCGATTCGCTGAGCACGGTAACGCCGCTTCGTTGC  
 #49  
 CGTAGCACTCCCGCATCCGCTGAGCACGATAACGCCGCTTCGTTGC  
 #50-3  
 NNNNNCACTCCCGCATTCGCTGAGCANNNGTAACGCCGCTNNGTNNN  
 #51  
 CGCAGCACTCCNNCATTCGGTGAGCACGGTAAGGCCGCTTCGTTGC  
 #52  
 CGCACCACGCCCCGATCCGCTGAGCACGGTAACACCGCTNNGTTGN  
 #53-5  
 CGCACCACGCCCCGATCCGCTGAGCANNNGTAACGCCGCTTCGTTNN  
 #54  
 CGCAGCACTCCNNCATTCGGTGAGCACGGTAAGGCCGCTTCGTTNN  
 #55  
 CGTAGCACTCCCGCATTCGCTGAACACGATAACGCCGCTNNGTTGC  
 #56  
 CGCACCACGCCCCGATCCGCTGAGCACGATAACGCCGCTTCGTTGC  
 #57-2  
 CGCACCACGCTNNCATCCNNTGAGCACGGTAACGTCGCTTCGTTGC  
 #58  
 CGCACCACGCTCGCATCCGCTGAGCACGGTAACGTCGCTTCGTTGC  
 #59  
 CGCAGCACTCTCTCATTCGCTGAGCANNATAACACCGCTTCGTTGC  
 #60  
 CGCAGCACGGTCGCATTCGCTGAGCACAATAACGCCGCTTCGTTGC  
 #61-3  
 NGTAGCACTCCNNCATTCGGTTGGCGNNGTAACGCCGCTTCGTTNN  
 #62  
 CGCAGCACGGTNNCATTCGCTGAGCACGATAACGCCGCTTCGTTGC

FIGURE 4a, sheet 4 of 6

#63  
 CGTAGCACTCCNNCATTTCGGTTGGCGCGGNNCGCCGCTTCGTTAC  
 #64  
 CGTAGCACTCTNNCATTTCGCTGGGCGCGGTAACGTCNCTNNGTTNN  
 #65  
 CGTAGCACTCCCGCATTTGCTGAGCACGGTAACGCGCTCCGATGC  
 #66  
 CGCACCAGGCTCGCATTTCGCTTAGCGCGGTAACGCGCTTCGTTGC  
 #67  
 CGTAGCACTCCCGCATTTGGTGAGCACGGTAACGCGCTCCGATGC  
 #68  
 CGCACCAGGCTCGCATTTCGCTTAGCGCGGTAACGCGCTTCGTTAC  
 #69  
 CGTAGCACTCCCGCATTCGCTGAGCACGATAACGCGCTTCGTTGC  
 #70  
 CGTAGCAGCCNNCATTTCGCTGAGCACGGTAACGCGCTTCGTTGC  
 #71  
 CGTAGCACTCCCGCATCTGGTGAGCACGGTAACGCGCTTCGTTGC  
 #72  
 CGTAGCACTCCCGCATTCGGTGAGCACGATAACGCGCTTCGTTGN  
 #73-2  
 CGCGCCAGGCTCGCATCCGCTTAACGCGGTAACGTCGCTTCGTTAC  
 #74  
 CGCACCAGCCNNCATCCGCTGAGCACGATAACGTCGCTTCATTGN  
 #75  
 CGCACCAGCCCGCATCCGCTGAGCACGATAACGTCGCTTCATTGC  
 #76-2  
 CGCAGCAGCCCGCATCCGCTGAGCACGGTAACGTCGCTTCATTGC  
 #77-2  
 CGCAGCACTCCCGCATTCGCTTGGCGCGGTAACGTCGCTTTGTTAC  
 #78  
 CGCAGCAGCTCGCATCCGCTGAGCACGGTAACGTCNCTTCGTTGC  
 #79  
 CGCAGCACTCTCGCATCCGCTGAGCACGGTAACGTCGCTNNGTTGC  
 #80  
 CGCAGCACTCTCGCATCCGCTGAGCACGGTAAGGCCGCTNNGTTAC  
 #81  
 CGCAGCACTCTCGCATCCGCTGAGCACGGTAACGTCGCTTCGTTGC  
 #82  
 CGCAGCACTCTCGCATCCGCTGAGCACGGTAAGGCCGCTTCGTTAC  
 #83  
 CGTAGCACTCCCGCATTCGCTGAGCACGGTAACGTCGCTTCGTTGC  
 #84  
 CGTAGCACTCTCGCATTTCGCTGAACACGGTAACGTCGCTCCGTTAC  
 #85  
 CGTAGCACTCCCGCATCCGCTGGGCACGGTAACGTCGCTTCGTTGC  
 #86  
 CGTAGCACTCCCGCATTCGGTTGGCGCGGTAACGTCGCTTCGTTAC  
 #87  
 CGTAGCACTCCNNCATCCGCTGGGCACGGTAACGTCGCTTCGTTGC  
 #88  
 CGCAGCACTCCNNCATTTCGGTTGGCGCGGTAACGTCGCTTCGTTAC  
 #89  
 CGCAGCACTCCCGCATTCGGTGAGCACGGTAACGCGCTTCGTTGC  
 #90  
 CTTAGCACTCCCGCATTCGGTGAGCACGGTAACGCGCTTCGTTGC  
 #91  
 CGCAGCACTCCCGCATTCGGTGAGCACGGTAACGCGCTTCGTTGC  
 #92  
 CTTAGCACTCCCGCATTCGGTGAGCACGGTAACGCGCTTCGTTGC  
 #93  
 CGTAGCACTCCCGCATTCGCTTGGCGCGGTAACGCGCTTCGTTGC

FIGURE 4a, sheet 5 of 6

#94  
CGCAGGGCGCCCGCATTCGCTTAGCGCGGTAACGCCGCTTCGTTGC  
#95  
CGTAGCACTCCNNCATTTCGCTTGGCGCGGTAACGCCGCTTCGTTGN  
#96  
CGCAGGGCGCCNNCATTTCGCTTAGCGCGGTAACGCCGCTTCGTTGN  
#97  
CGTAGCACTCCNNCATTTCGGTGAGCACGGTAACGCCGCTTCGTTGC  
#98  
CGTAGCACTCTNNCATTTGGTGAGCACGGTAACGCCGCTTCGTTGC  
#99  
CGTAGCACTCCCGCATTCGGTGAGCACGGTAACGCCGCTTCGTTGC  
#100  
CGTAGCACTCTCTCATTTGGTGAGCACGGTAACGCCGCTTCGTTGC  
#101  
CGTAGCACTCCNNCATTTCGGTGGCGCGGTAACGTCGCTTCGTTAC  
#102  
CGCAGCACGCCNNCATCCGCTTGGCACGGTAACGTCGCTTCGTTAC

The non-singleton haplotype data were fitted to a neighbor-joining tree (L is Liverpool sample):

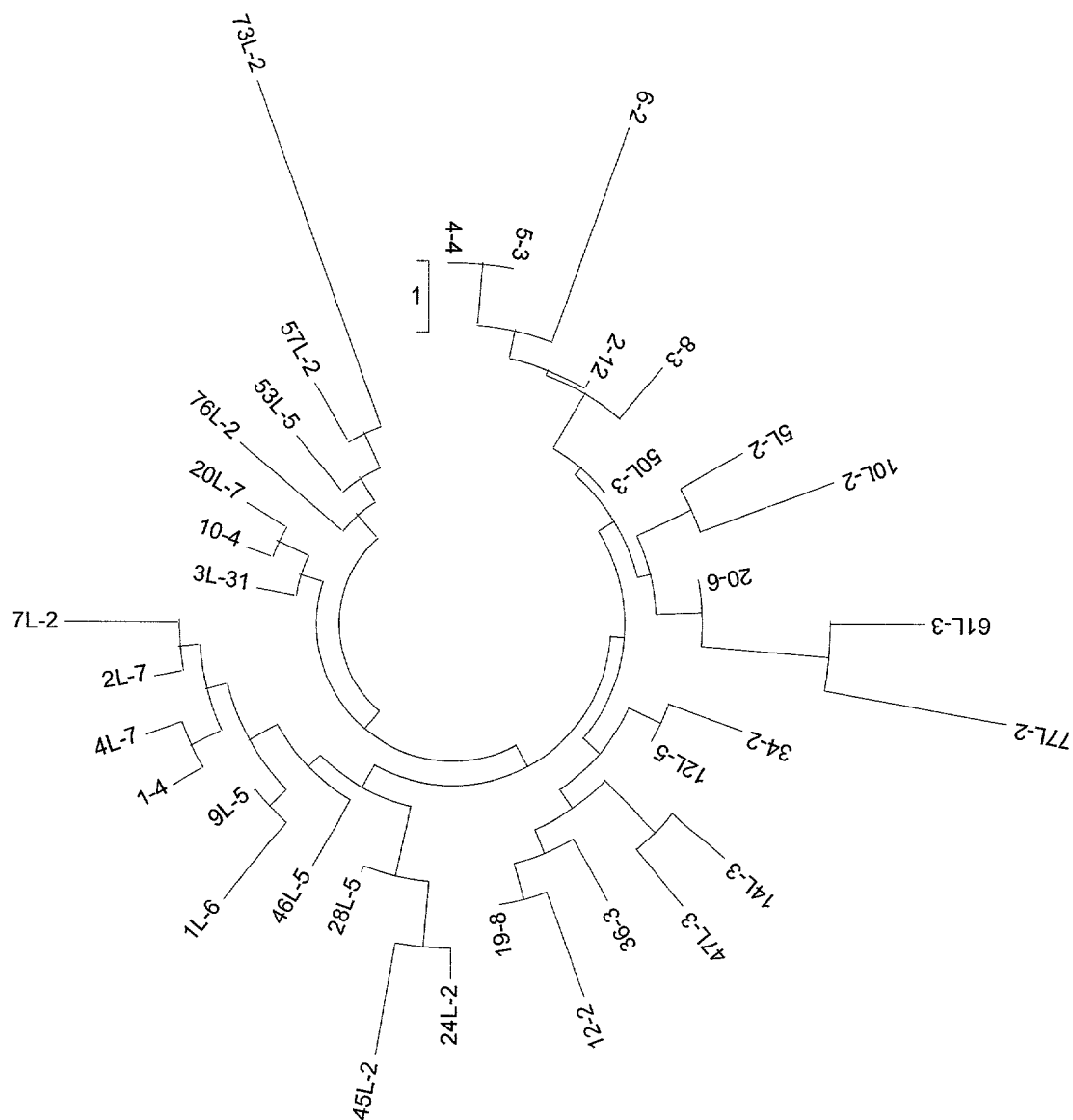
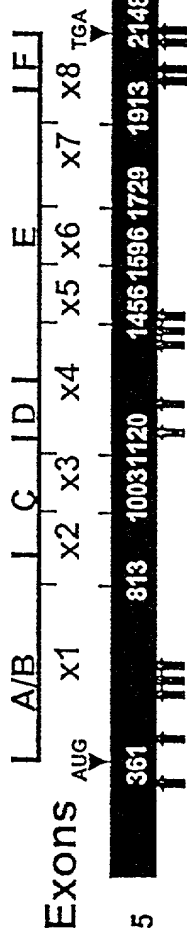
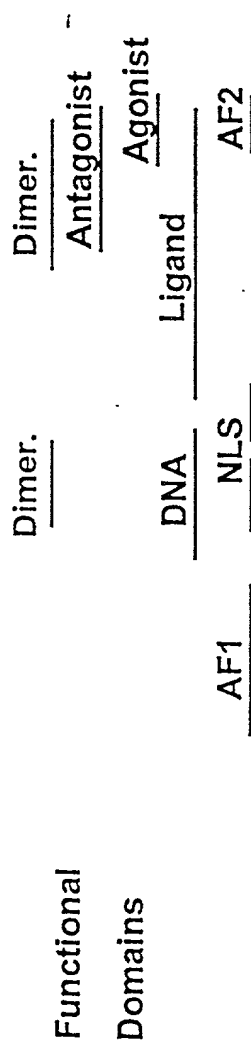


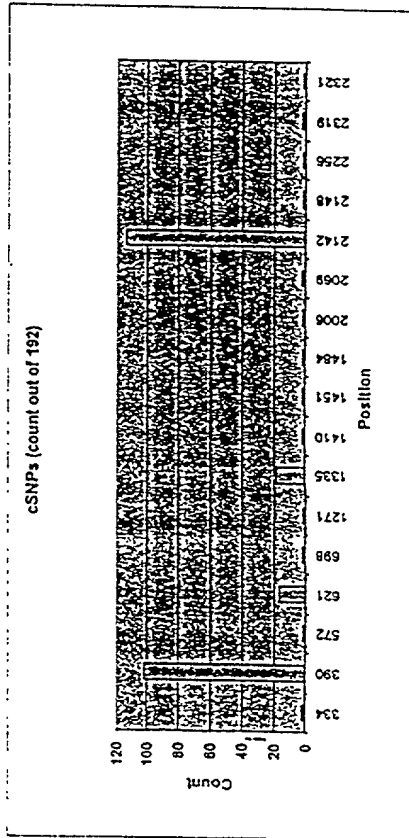
FIGURE 4b

# cSNP candidates



X03635

Candidate cSNPs



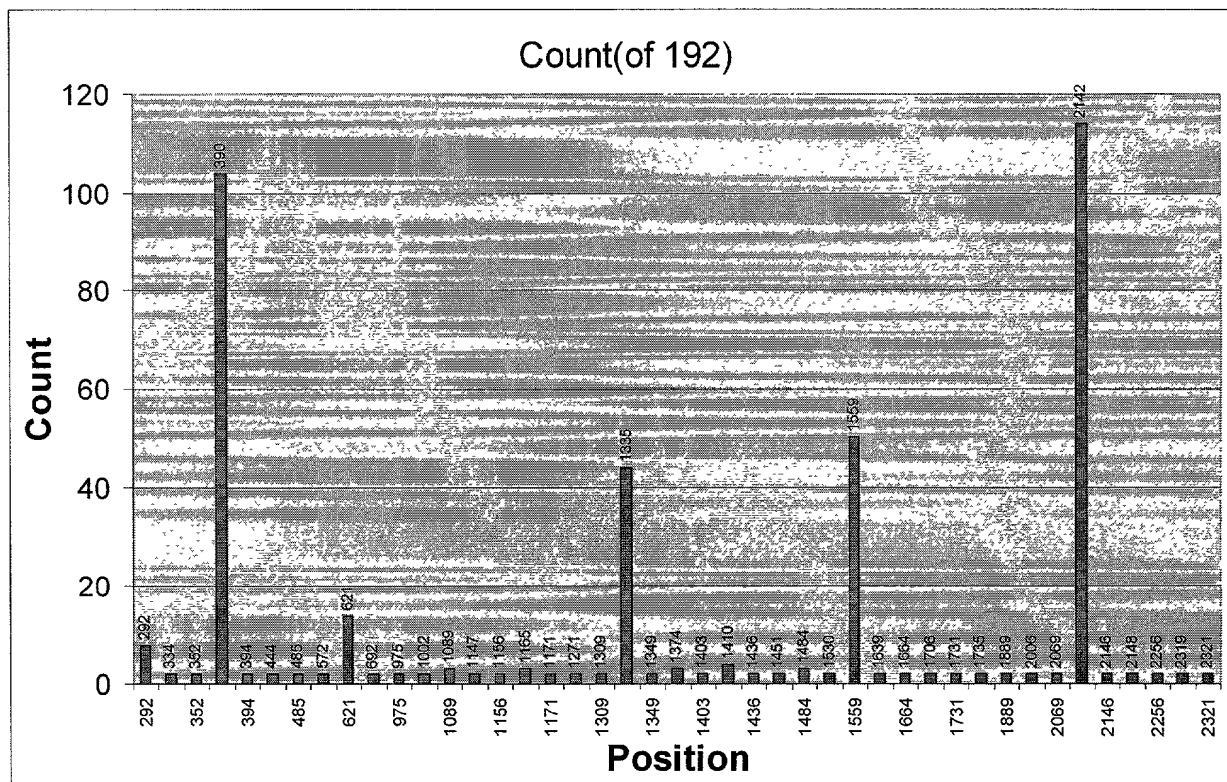


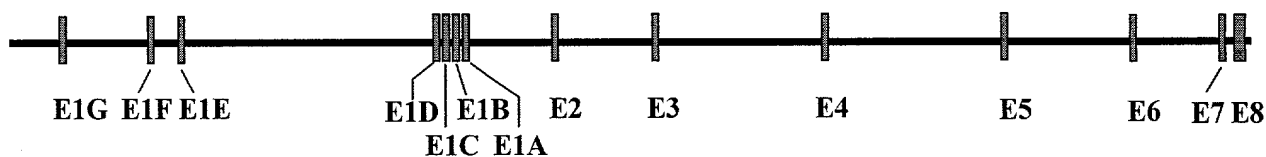
FIGURE 6



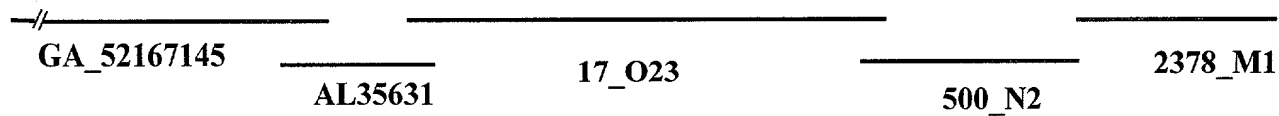
# Estrogen Receptor Alpha

0.0 Kb                      100.0 Kb                      200.0 Kb                      300.0 Kb                      400.0 Kb

**A**



**B**



(A) Complete structure of the human estrogen receptor alpha (ER $\alpha$ ). Exons are represented by filled boxes and introns by horizontal lines. (B) Order and names of contigs used to complete the genomic sequence. GA numbers represent Celera contig numbers. Research genetics BAC clones are represented by standard plate and well numbering.

FIGURE 7

		1A		1A		1A		1A		1A		1B		1B		1C	
		170035		170068		170256		170368		170487		169812		169823		167950	
		C	A	G	T	C	T	A	G	G	C	C	G	A	G	C	G
total	total	0.99	0.01	1	0	0.46	0.54	1	0	0.96	0.04	0.94	0.06	1	0	1	0
N. Eur	N. Eur	1	0	1	0	0.55	0.45	1	0	0.9	0.1	1	0	1	0	1	0
a01	GM03715	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a02	GM06816	2	0	2	0	1	1	2	0	1	1	2	0	2	0	n/a	n/a
a03	GM10923	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
a04	GM10924	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a05	GM11814	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a06	GM12136	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
a07	GM12137	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
a08	GM12547	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
a09	GM12548	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
a10	GM14667	2	0	2	0	0	2	2	0	2	0	2	0	2	0	n/a	n/a
Chi	Chi	0.95	0.05	1	0	0.5	0.5	1	0	0.95	0.05	1	0	1	0	1	0
b01	GM00576	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b02	GM03433	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b03	GM06090	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
b04	GM07426	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
b05	GM09820	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
b06	GM11321	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
b07	GM11322	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b08	GM11323	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
b09	GM11324	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0
b10	GM11325	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
In. Pak	In. Pak	1	0	1	0	0.5	0.5	1	0	1	0	1	0	1	0	1	0
c01	GM01032	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c02	GM01225	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c03	GM04300	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
c04	GM07895	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c05	GM10176	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
c06	GM10666	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c07	GM10667	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c08	GM11213	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
c09	GM11860	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c10	GM14611	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
Af. Amer	Af. Amer	1	0	1	0	0.5	0.5	1	0	0.94	0.06	0.9	0.1	1	0	1	0
d01	GM14660	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1	1	2	0	2	0
d02	GM14661	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d03	GM14663	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
d04	GM14665	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0
d05	GM14672	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
d06	GM14682	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
d07	GM14683	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
d08	GM14696	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
d09	GM14698	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
d10	GM14700	2	0	2	0	1	1	2	0	2	0	2	0	2	0	n/a	n/a
SW Amer Ind	SW Amer. Ind	1	0	1	0	0.25	0.75	1	0	1	0	0.8	0.2	1	0	1	0
e01	GM12060	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
e02	GM12061	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0
e03	GM12062	2	0	2	0	0	2	2	0	2	0	2	0	2	0	n/a	n/a
e04	GM12063	2	0	2	0	0	2	2	0	2	0	1	1	2	0	2	0
e05	GM12064	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
e06	GM14308	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
e07	GM14309	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
e08	GM12310	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
e09	GM14311	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
e10	GM14313	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0

FIGURE 8a(1), sheet 1 of 6

	1D 167989		1C 168054		1E 64331		1F 52901		1F 52877		1G 18783		1G 18937		1G 19034		Intron 3 243187	
	T	G	C	G	T	C	C	T	G	T	C	T	A	C	T	C	C	T
total	0.76	0.24	1	0	0.2	0.8	0.99	0.01	0.99	0.01	0.99	0.01	0.99	0.01	1	0	0.33	0.674
N. Eur	0.94	0.06	1	0	0.45	0.55	1	0	0.95	0.05	1	0	1	0	1	0	0.67	0.333
a01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	n/a	n/a
a02	n/a	n/a	n/a	n/a	0	2	2	0	2	0	2	0	2	0	2	0	2	0
a03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a04	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0	1	1
a05	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
a06	2	0	2	0	n/a	1	2	0	2	0	2	0	2	0	2	0	1	1
a07	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	0	2
a08	1	1	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
a09	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	1	1
a10	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	1	1
Chi	0.75	0.25	1	0	0	1	1	0	1	0	1	0	0.95	0.05	1	0	0.3	0.7
b01	1	1	2	0	0	2	2	0	2	0	2	0	1	1	2	0	0	2
b02	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
b03	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
b04	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
b05	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
b06	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
b07	1	1	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	0	2
b08	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
b09	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	0	2
b10	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
In. Pak	0.75	0.25	1	0	0.28	0.72	1	0	1	0	1	0	1	0	1	0	0.25	0.75
c01	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
c02	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
c03	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
c04	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
c05	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
c06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c07	1	1	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	1	1
c08	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	1	1
c09	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
c10	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
Af. Amer	0.61	0.39	1	0	0.22	0.78	0.94	0.06	1	0	0.95	0.05	1	0	1	0	0.28	0.722
d01	1	1	2	0	0	2	1	1	2	0	2	0	2	0	2	0	1	1
d02	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	n/a	n/a
d03	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
d04	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d05	1	1	2	0	0	2	2	0	2	0	1	1	2	0	2	0	0	2
d06	1	1	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	1	1
d07	1	1	2	0	0	2	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2
d08	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
d09	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
d10	n/a	n/a	n/a	n/a	0	2	2	0	2	0	2	0	2	0	2	0	1	1
SW Amer. Ind	0.72	0.28	1	0	0.13	0.88	1	0	1	0	1	0	1	0	1	0	0.13	0.875
e01	2	0	2	0	0	2	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2
e02	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
e03	n/a	n/a	n/a	n/a	0	2	2	0	2	0	2	0	2	0	2	0	0	2
e04	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
e05	0	2	2	0	0	2	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2
e06	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	1	1
e07	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
e08	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
e09	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	n/a	n/a
e10	1	1	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	n/a	n/a

FIGURE 8a(1), sheet 2 of 6

	Exon 3 243055		Exon 4 306292		Exon 4 306382		Exon 6 423067		intron 6 423149		Intron 6 423163		Intron 6 423220		Intron 6 423232		Intron 6 423258	
	C	T	G	O	C	G	T	C	G	T	A	G	G	A	C	G	A	G
total	0.98	0.02	1	0	0.83	0.17	0.99	0.01	0.81	0.19	0.88	0.13	0.75	0.25	1	0	0.8	0.2
N. Eur	1	0	1	0	1	0	0.95	0.05	0.85	0.15	0.95	0.05	0.8	0.2	1	0	0.85	0.15
a01	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2	2	0	2	0
a02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a04	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
a05	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
a06	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
a07	2	0	n/a	n/a	n/a	n/a	1	1	1	1	1	1	1	1	2	0	1	1
a08	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a09	2	0	n/a	n/a	n/a	n/a	2	0	1	1	2	0	2	0	2	0	1	1
a10	2	0	2	0	2	0	2	0	1	1	2	0	1	1	2	0	1	1
Chi	1	0	1	0	0.75	0.25	1	0	0.65	0.35	0.7	0.3	0.75	0.25	1	0	0.65	0.35
b01	2	0	2	0	0	2	2	0	0	2	0	2	0	2	0	2	0	2
b02	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
b03	2	0	2	0	1	1	2	0	2	0	2	0	1	1	2	0	2	0
b04	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
b05	2	0	n/a	n/a	n/a	n/a	2	0	0	2	0	2	2	0	2	0	0	2
b06	2	0	n/a	n/a	2	0	2	0	0	2	1	1	2	0	2	0	0	2
b07	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
b08	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
b09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b10	2	0	2	0	1	1	2	0	1	1	1	1	2	0	2	0	1	1
In. Pak	0.9	0.1	1	0	0.75	0.25	1	0	0.89	0.11	0.9	0.1	0.6	0.4	1	0	0.85	0.15
c01	2	0	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
c02	2	0	2	0	2	0	2	0	1	1	2	0	1	1	2	0	1	1
c03	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c04	2	0	n/a	n/a	2	0	2	0	2	0	2	0	0	2	2	0	2	0
c05	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
c06	1	1	2	0	2	0	2	0	n/a	1	2	0	2	0	2	0	1	1
c07	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c08	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
c09	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
c10	2	0	n/a	n/a	n/a	n/a	2	0	1	n/a	0	2	2	0	2	0	1	1
Af. Amer	1	0	1	0	1	0	1	0	0.7	0.3	0.85	0.15	0.65	0.35	1	0	0.7	0.3
d01	2	0	2	0	2	0	2	0	0	2	0	2	2	0	2	0	0	2
d02	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
d03	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
d04	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
d05	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
d06	2	0	n/a	n/a	2	0	2	0	0	2	2	0	2	0	2	0	0	2
d07	2	0	n/a	n/a	n/a	n/a	2	0	1	1	2	0	1	1	2	0	1	1
d08	2	0	n/a	n/a	2	0	2	0	1	1	1	1	1	1	2	0	1	1
d09	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2	2	0	2	0
d10	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
SW Amer. Ind	1	0	1	0	0.85	0.15	1	0	1	0	1	0	1	0	1	0	1	0
e01	2	0	1	n/a	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e06	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
e07	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
e08	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
e09	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
e10	n/a	n/a	1	n/a	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

FIGURE 8a(1), sheet 3 of 6

	8 208		8 220		Exon 8 460929		Exon 8 461199		Exon 8 461231		Exon 8 461337		Exon 8 461520		Exon 8 461843		Exon 8 461968	
	C	T	A	G	G	A	T	C	A	G	A	C	C	G	G	A	T	C
total	0.99	0.01	1	0	0.79	0.21	1	0	1	0	0.97	0.03	1	0	1	0	0.53	0.47
N. Eur	1	0	1	0	0.8	0.2	1	0	1	0	1	0	1	0	1	0	0.55	0.45
a01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a02	n/a	n/a	n/a	n/a	1	1	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	1	1
a03	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
a04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
a05	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0	1	1
a06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a08	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
a09	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
a10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
Chi	1	0	1	0	0.85	0.15	1	0	1	0	1	0	1	0	1	0	0.6	0.4
b01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b02	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
b03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
b04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b05	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
b06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
b08	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
b09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b10	n/a	n/a	n/a	n/a	2	0	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	0	2
In. Pak	0.95	0.05	1	0	0.8	0.2	1	0	1	0	1	0	1	0	1	0	0.4	0.6
c01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
c02	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
c03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
c04	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
c05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
c06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c08	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
c09	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c10	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
Af. Amer	1	0	1	0	0.8	0.2	1	0	1	0	0.83	0.17	1	0	1	0	0.45	0.55
d01	n/a	n/a	n/a	n/a	2	0	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	1	1
d02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
d03	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0	1	1
d04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
d05	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
d06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
d07	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
d08	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
d09	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0	0	2
d10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
SW Amer Ind	1	0	1	0	0.7	0.3	1	0	1	0	1	0	1	0	1	0	0.65	0.35
e01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e02	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	0	2
e03	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
e04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e05	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
e06	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
e07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e08	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
e09	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0	1	1
e10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1

FIGURE 8a(1), sheet 4 of 6

	Exon 8 462125		8 462398		8 462683		8 462949		8 463958		8 463966		8 464237		8 464735		8 465074	
	C	T	G	A	C	A	T	G	T	C	C	T	G	A	T	A	T	C
total	0.98	0.02	0.99	0.01	0.89	0.11	0.98	0.02	0.98	0.02	1	0	1	0	0.87	0.13	0.99	0.01
N. Eur	1	0	1	0	1	0	1	0	0.9	0.1	1	0	1	0	0.9	0.1	1	0
a01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a08	2	0	2	0	2	0	2	0	0	2	2	0	2	0	0	2	2	0
a09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
Chi	1	0	1	0	0.9	0.1	1	0	1	0	1	0	1	0	0.9	0.1	0.95	0.05
b01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b03	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	2	0
b04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b05	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	1	1
b06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b08	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
In. Pak	1	0	1	0	0.95	0.05	1	0	1	0	1	0	1	0	0.95	0.05	1	0
c01	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c03	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c08	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c09	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	2	0
c10	2	0	2	0	2	0	2	0	2	0	n/a	n/a	2	0	2	0	2	0
Af. Amer	0.9	0.1	0.95	0.05	0.95	0.05	0.95	0.05	1	0	1	0	1	0	1	0	1	0
d01	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d03	2	0	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
d04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d06	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d07	1	1	2	0	2	0	2	0	2	0	n/a	n/a	2	0	2	0	2	0
d08	2	0	1	1	1	1	2	0	2	0	n/a	n/a	2	0	2	0	2	0
d09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
d10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
SW Amer. Ind	1	0	1	0	0.65	0.35	0.95	0.05	1	0	1	0	1	0	0.6	0.4	1	0
e01	2	0	2	0	1	1	1	1	2	0	2	0	2	0	1	1	2	0
e02	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e03	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	2	0
e04	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	2	0
e05	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e06	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1	2	0
e07	2	0	2	0	1	1	2	0	2	0	2	0	2	0	0	2	2	0
e08	2	0	2	0	0	2	2	0	2	0	2	0	2	0	0	2	2	0
e09	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
e10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

FIGURE 8a(1), sheet 5 of 6

	3' Flanking Exon 8 (AL078582)															
	54404		54460		48798		48924		49005		49116		49148		49251	
	G	A	C	A	C	G	G	A	A	G	C	G	C	T	A	G
total	0.88	0.12	0.88	0.13	0.99	0.01	0.99	0.01	0.98	0.02	0.64	0.36	0.99	0.01	0.99	0.01
N. Eur	0.85	0.15	1	0	1	0	1	0	0.95	0.05	0.7	0.3	1	0	1	0
a01	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a02	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
a03	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
a04	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
a05	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
a06	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a07	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
a08	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
a09	2	0	2	0	n/a	n/a	2	0	1	1	2	0	2	0	2	0
a10	2	0	n/a	n/a	n/a	n/a	2	0	2	0	1	1	2	0	2	0
Chi	0.78	0.22	0.86	0.14	1	0	1	0	1	0	0.78	0.22	1	0	1	0
b01	0	2	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0
b02	1	1	2	0	2	0	2	0	2	0	1	1	2	0	2	0
b03	2	0	1	1	2	0	2	0	2	0	1	1	2	0	2	0
b04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
b05	2	0	1	1	2	0	2	0	2	0	1	1	2	0	2	0
b06	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
b07	2	0	2	0	n/a	n/a	2	0	2	0	1	1	2	0	2	0
b08	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
b09	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0	2	0
b10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
In. Pak	0.85	0.15	0.94	0.06	1	0	1	0	1	0	0.72	0.28	1	0	1	0
c01	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c02	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c03	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c04	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c05	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c06	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
c07	1	1	n/a	n/a	2	0	2	0	2	0	n/a	n/a	2	0	2	0
c08	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
c09	1	1	1	1	2	0	2	0	2	0	2	0	2	0	2	0
c10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
Af. Amer	0.93	0.07	1	0	0.94	0.06	1	0	0.94	0.06	0.31	0.69	0.94	0.06	1	0
d01	n/a	n/a	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
d02	1	1	2	0	1	1	2	0	2	0	1	1	2	0	2	0
d03	2	0	n/a	n/a	2	0	2	0	2	0	1	1	2	0	2	0
d04	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
d05	2	0	n/a	n/a	2	0	2	0	2	0	0	2	2	0	2	0
d06	2	0	2	0	2	0	2	0	1	1	2	0	1	1	2	0
d07	n/a	n/a	n/a	n/a	2	0	2	0	2	0	0	2	2	0	n/a	n/a
d08	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
d09	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
d10	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
SW Amer Ind	1	0	0.65	0.35	1	0	0.94	0.06	1	0	0.67	0.33	1	0	0.92	0.08
e01	2	0	2	0	2	0	2	0	2	0	1	1	2	0	1	1
e02	2	0	2	0	n/a	n/a	1	1	2	0	1	1	2	0	2	0
e03	2	0	1	1	n/a	n/a	2	0	2	0	2	0	2	0	2	0
e04	2	0	1	1	n/a	n/a	2	0	2	0	1	1	2	0	2	0
e05	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
e06	2	0	1	1	n/a	n/a	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
e07	2	0	0	2	1	n/a	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
e08	2	0	0	2	n/a	n/a	2	0	2	0	2	0	2	0	2	0
e09	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
e10	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

FIGURE 8a(1), sheet 6 of 6

	intron 1D 167989			intron 1D 167989	
	(780)			(780)	
	T	G		T	G
	0 94	0 06		0 94	0 06
a01	2	0	e01		
a02	2	0	e02	2	0
a03	2	0	e03	1	1
a04	2	0	e04	0	2
a05	2	0	e05	2	0
a06	1	1	e06	1	1
a07	2	0	e07	2	0
a08	2	0	e08	2	0
a09	2	0	e09	2	0
a10	2	0	e10	2	0
a11	2	0	e11	2	0
a12	2	0	e12	2	0
b01	2	0	f01	2	0
b02	2	0	f02	2	0
b03	2	0	f03	1.00	1.00
b04	1	1	f04	2	0
b05	2	0	f05	2	0
b06	2	0	f06	2	0
b07	2	0	f07	2	0
b08			f08	2	0
b09			f09	2	0
b10	2	0	f10	2	0
b11	1	1	f11	2	0
b12			f12	2	0
c01	2	0	g01	2	0
c02	2	0	g02	1	1
c03	2	0	g03	2	0
c04	2	0	g04	2	0
c05	2	0	g05	1	1
c06	2	0	g06	2	0
c07	2	0	g07	1	1
c08	2	0	g08	1	1
c09	2	0	g09	2	0
c10	2	0	g10	2	0
c11	2	0	g11	2	0
c12	2	0	g12	2	0
d01	2	0	h01	1	1
d02	2	0	h02	2	0
d03	2	0	h03	2	0
d04	2	0	h04	2	0
d05	2	0	h05	2	0
d06	2	0	h06	2	0
d07	2	0	h07	2	0
d08	2	0	h08	1	1
d09	2	0	h09	2	0
d10	1	1	h10	2	0
d11	2	0	h11	2	0
d12	1	1	h12	2	0

FIGURE 8a(2)



	exon 1A 170035		exon 1A 170068		exon 1A 170256		exon 1A 170368		exon 1A 170487		exon 1B 169812		exon 1B 169823		exon 1C 167950	
	C	A	G	T	C	T	A	G	G	C	C	G	A	G	C	G
	1 00	0.00	0.99	0.01	0.55	0.45	0.99	0.01	0.87	0.13	0.99	0.01	0.99	0.01	0.98	0.02
T1	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T2	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T3	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T4	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T5	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T6	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T7	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
T8	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T9	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T10	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T11	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T12	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T13	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T14	2	0	2	0	1	1	2	0	2	0	1	1	1	1	2	0
T15	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T16	n/a	n/a	n/a	n/a	n/a	n/a	2	0	n/a	n/a	2	0	2	0	2	0
T17	2	0	1	1	1	1	2	0	2	0	2	0	2	0	2	0
T18	2	0	2	0	2	0	2	0	1	1	2	0	2	0	1	1
T19	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T20	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T21	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T22	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T23	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T24	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T25	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T26	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T28	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T30	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T31	2	0	2	0	2	0	1	1	0	2	2	0	2	0	1	1
T32	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T34	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T35	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
T36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T37	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T38	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
T39	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T40	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T41	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T42	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T43	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
T44	n/a	n/a	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T45	2	0	2	0	2	0	2	0	0	2	2	0	2	0	2	0
T46	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T47	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T48	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0

FIGURE 8b(1), sheet 1 of 12

	intron 1D 167989		exon 1C 168054		exon 1E 64331		exon 1F 52901		exon 1F 52877		exon 1G 18783		exon 1G 18937		exon 1G 19034	
	T	G	C	G	C	T	C	T	G	T	C	T	A	C	T	C
	0.83	0.17	0.99	0.01	0.63	0.38	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
T1	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T2	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T3	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T4	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T5	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T6	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T8	0	2	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T9	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T11	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T12	1	1	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T13	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T14	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T15	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T16	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T17	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T18	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T19	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T20	2	0	2	0	0	2	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T21	2	0	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T22	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T23	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T24	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T25	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T26	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T28	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T29	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T30	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T31	0	2	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T32	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T33	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T34	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T35	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T36	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T37	1	1	1	1	1	1	2	0	2	0	2	0	2	0	2	0
T38	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T39	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T40	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T42	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T43	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T44	2	0	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T45	0	2	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
T46	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T48	1	1	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0

FIGURE 8b(1), sheet 2 of 12

	Intron 3 243187		exon 3 243055		exon 4 306292		exon 4 306382		exon 6 423067		Intron 6 423149		Intron 6 423163		Intron 6 423220	
	C	T	C	T	G	A	C	G	T	C	G	T	A	G	G	A
	0.63	0.38	0.97	0.03	0.99	0.01	0.83	0.17	1.00	0.00	0.88	0.13	0.90	0.10	0.70	0.30
T1	1	1	2	0	2	0	1	1	2	0	2	0	2	0	2	0
T2	1	1	1	1	2	0	1	1	2	0	2	0	2	0	2	0
T3	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T4	1	1	1	1	2	0	2	0	2	0	2	0	2	0	1	1
T5	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T6	1	1	2	0	1	1	1	1	2	0	1	1	1	1	2	0
T7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T9	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T11	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T12	1	1	2	0	2	0	1	1	2	0	0	2	0	2	2	0
T13	0	2	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T14	0	2	2	0	2	0	2	0	2	0	0	2	1	1	2	0
T15	1	1	2	0	2	0	2	0	2	0	1	1	1	1	2	0
T16	2	0	2	0	2	0	2	0	n/a	n/a	2	0	2	0	2	0
T17	0	2	2	0	2	0	0	2	2	0	2	0	2	0	2	0
T18	1	1	2	0	2	0	2	0	2	0	1	1	2	0	1	1
T19	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T20	0	2	2	0	2	0	0	2	2	0	2	0	2	0	2	0
T21	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T22	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T23	1	1	2	0	2	0	1	1	2	0	1	1	0	2	2	0
T24	0	2	1	1	2	0	0	2	2	0	2	0	2	0	2	0
T25	0	2	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T26	1	1	2	0	2	0	1	1	2	0	2	0	2	0	2	0
T27	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T28	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T30	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T31	2	0	2	0	2	0	2	0	2	0	1	1	2	0	1	1
T32	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T34	0	2	2	0	2	0	1	1	2	0	0	2	0	2	2	0
T35	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T37	0	2	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T38	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T39	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
T40	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T41	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T42	1	1	2	0	2	0	1	1	2	0	2	0	2	0	1	1
T43	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T44	0	2	2	0	2	0	1	1	2	0	1	1	1	1	1	1
T45	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T46	0	2	2	0	2	0	1	1	2	0	2	0	2	0	2	0
T47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T48	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0

FIGURE 8b(1), sheet 3 of 12

	Intron 6 423232		Intron 6 423258		Intron 7 460553		Intron 7 460564		exon 8 461199		exon 8 461199		exon 8 461231		exon 8 461337	
	C	G	A	G	C	T	G	A	G	A	T	C	A	G	A	C
	0.98	0.02	0.89	0.11	0.96	0.04	0.99	0.01	0.86	0.12	0.99	0.01	0.99	0.01	1.00	0.00
T1	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T2	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T3	2	0	2	0	2	0	2	0	1	1	1	1	2	0	2	0
T4	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T5	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T6	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
T7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T9	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T11	2	0	2	0	2	0	2	0	0	2	2	0	2	0	2	0
T12	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
T13	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T14	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
T15	2	0	1	1	2	0	2	0	1	1	n/a	n/a	n/a	n/a	n/a	n/a
T16	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T17	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T18	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
T19	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T20	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T21	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T22	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T23	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
T24	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T25	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T26	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T27	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T28	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T30	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T31	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
T32	2	0	2	0	1	1	2	0	2	0	2	0	1	1	2	0
T33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T34	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
T35	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T37	2	0	2	0	2	0	1	1	1	1	2	0	2	0	2	0
T38	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T39	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T40	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T42	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T43	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0
T44	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0
T45	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T46	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
T47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T48	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

FIGURE 8b(1), sheet 4 of 12

	exon 8 461520		exon 8 461843		exon 8 461968		exon 8 462125		exon 8 4623998		exon 8 462683		exon 8 462949		exon 8 463958	
	C	G	G	A	T	C	C	T	G	A	C	A	T	G	T	C
	0.97	0.03	0.99	0.01	0.51	0.49	1.00	0.00	1.00	0.00	0.95	0.05	1.00	0.00	0.96	0.04
T1	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T2	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T3	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T4	2	0	2	0	0	2	n/a	n/a	2	0	2	0	2	0	1	1
T5	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T6	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0
T7	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T9	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T11	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T12	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T13	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
T14	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T15	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T16	2	0	2	0	2	0	2	0	2	0	1	1	2	0	n/a	n/a
T17	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T18	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T19	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1
T20	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T21	2	0	2	0	n/a	n/a	2	0	2	0	2	0	2	0	2	0
T22	2	0	2	0	1	1	2	0	n/a	n/a	2	0	2	0	1	1
T23	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T24	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T25	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
T26	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
T27	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T28	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T30	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T31	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T32	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T33	1	1	2	0	1	1	2	0	2	0	2	0	2	0	n/a	n/a
T34	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T35	2	0	1	1	0	2	2	0	2	0	2	0	2	0	n/a	n/a
T36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T37	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T38	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T39	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T40	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T42	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T43	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T44	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T45	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
T46	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
T47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
T48	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

FIGURE 8b(1), sheet 5 of 12

	exon 8 463966		exon 8 464237		exon 8 464735		exon 8 465074		exon 8 54404		exon 8 54460	
	C	T	G	A	T	A	T	C	G	A	C	A
	0.99	0.01	0.98	0.02	0.96	0.04	1.00	0.00	0.74	0.26	0.97	0.03
T1	2	0	2	0	2	0	2	0	2	0	2	0
T2	2	0	2	0	2	0	2	0	2	0	2	0
T3	2	0	2	0	2	0	2	0	2	0	2	0
T4	2	0	2	0	1	1	2	0	2	0	2	0
T5	2	0	2	0	2	0	2	0	2	0	2	0
T6	2	0	2	0	1	1	2	0	2	0	1	1
T7	2	0	2	0	2	0	2	0	1	1	2	0
T8	2	0	1	1	2	0	2	0	2	0	2	0
T9	2	0	2	0	2	0	2	0	2	0	2	0
T10	2	0	2	0	2	0	2	0	1	1	2	0
T11	2	0	2	0	2	0	2	0	2	0	2	0
T12	2	0	2	0	2	0	2	0	0	2	2	0
T13	2	0	2	0	2	0	2	0	1	1	2	0
T14	2	0	2	0	2	0	2	0	2	0	2	0
T15	2	0	2	0	2	0	2	0	2	0	2	0
T16	n/a	n/a	2	0	1	1	2	0	1	1	1	1
T17	2	0	2	0	2	0	2	0	2	0	2	0
T18	2	0	2	0	2	0	2	0	2	0	2	0
T19	2	0	2	0	2	0	2	0	2	0	2	0
T20	2	0	2	0	2	0	2	0	2	0	2	0
T21	2	0	2	0	2	0	2	0	1	1	n/a	n/a
T22	2	0	2	0	1	1	2	0	2	0	2	0
T23	2	0	2	0	2	0	2	0	1	1	2	0
T24	2	0	2	0	2	0	2	0	2	0	2	0
T25	2	0	2	0	2	0	2	0	1	1	2	0
T26	2	0	2	0	2	0	2	0	1	1	2	0
T27	2	0	2	0	2	0	2	0	2	0	n/a	n/a
T28	2	0	2	0	2	0	2	0	0	2	2	0
T29	2	0	2	0	2	0	2	0	2	0	2	0
T30	2	0	2	0	2	0	2	0	2	0	2	0
T31	2	0	2	0	2	0	2	0	1	1	2	0
T32	2	0	2	0	2	0	2	0	1	1	n/a	n/a
T33	n/a	n/a	2	0	2	0	2	0	1	1	2	0
T34	1	1	2	0	2	0	2	0	1	1	2	0
T35	n/a	n/a	2	0	2	0	2	0	2	0	n/a	n/a
T36	2	0	2	0	2	0	2	0	0	2	2	0
T37	2	0	2	0	2	0	2	0	2	0	2	0
T38	2	0	2	0	2	0	2	0	2	0	2	0
T39	2	0	2	0	2	0	2	0	1	1	2	0
T40	2	0	2	0	2	0	2	0	1	1	2	0
T41	2	0	2	0	2	0	2	0	n/a	n/a	n/a	n/a
T42	2	0	2	0	2	0	2	0	0	2	2	0
T43	2	0	2	0	2	0	2	0	n/a	n/a	n/a	n/a
T44	2	0	2	0	2	0	2	0	n/a	n/a	n/a	n/a
T45	2	0	1	1	2	0	2	0	2	0	n/a	n/a
T46	2	0	2	0	2	0	2	0	2	0	n/a	n/a
T47	2	0	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
T48	2	0	2	0	2	0	2	0	1	1	2	0

FIGURE 8b(1), sheet 6 of 12

	exon 1A 170035		exon 1A 170068		exon 1A 170256		exon 1A 170368		exon 1A 170487		exon 1B 169812		exon 1B 169823		exon 1C 167950	
	C	A	G	T	C	T	A	G	G	C	C	G	A	G	C	G
sum tumor	92	0	93	1	52	42	95	1	82	12	95	1	95	1	94	2
blood freq	1.00	0.00	0.99	0.01	0.50	0.50	0.99	0.01	0.92	0.08	0.99	0.01	0.99	0.01	0.98	0.02
B1	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B2	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B3	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B4	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B5	B6   B7		B8		2	0	2	0	2	0	2	0	2	0	2	0
B6	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B9	n/a	n/a	n/a	n/a	1	1	2	0	n/a	n/a	2	0	2	0	2	0
B10	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B11	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B12	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B13	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B14	2	0	2	0	1	1	2	0	2	0	1	1	1	1	2	0
B15	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B16	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0	2	0
B17	2	0	1	1	1	1	2	0	2	0	2	0	2	0	2	0
B18	2	0	2	0	2	0	2	0	1	1	2	0	2	0	1	1
B19	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B20	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B21	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B22	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B23	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B24	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B25	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B26	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B28	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B30	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B31	2	0	2	0	2	0	1	1	0	2	2	0	2	0	1	1
B32	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B34	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B35	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B37	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B38	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B39	n/a	n/a	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B40	2	0	2	0	0	2	2	0	1	1	2	0	2	0	2	0
B41	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B42	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B43	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B44	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B45	2	0	2	0	2	0	2	0	0	2	2	0	2	0	2	0
B46	n/a	n/a	n/a	n/a	na	na	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B47	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B48	n/a	n/a	2	0	0	2	2	0	2	0	2	0	2	0	2	0

FIGURE 8b(1), sheet 7 of 12

	intron 1D 167989		exon 1C 168054		exon 1E 64331		exon 1F 52901		exon 1F 52877		exon 1G 18783		exon 1G 18937		exon 1G 19034	
	T	G	C	G	C	T	C	T	G	T	C	T	A	C	T	C
sum tumor	80	16	95	1	60	36	78	0	78	0	96	0	96	0	96	0
blood freq	0.84	0.16	0.99	0.01	0.64	0.36	1.00	0.00	0.97	0.03	1.00	0.00	1.00	0.00	0.99	0.01
B1	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B2	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B3	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B4	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B5	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B6	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B8	0	2	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B9	2	0	2	0	0	2	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B11	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B12	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B13	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B14	1	1	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B15	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B16	2	0	2	0	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B17	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B18	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B19	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B20	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B21	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B22	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B23	2	0	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B24	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
B25	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B26	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B28	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B29	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B30	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B31	0	2	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B32	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B33	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B34	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B35	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
B36	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B37	1	1	1	1	1	1	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B38	1	1	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B39	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B40	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B42	1	1	2	0	0	2	2	0	2	0	2	0	2	0	1	1
B43	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B44	2	0	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0
B45	0	2	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B46	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B47	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B48	2	0	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0

FIGURE 8b(1), sheet 8 of 12



	Intron 3 243187		exon 3 243055		exon 4 306292		exon 4 306382		exon 6 423067		Intron 6 423149		Intron 6 423163		Intron 6 423220	
	C	T	C	T	G	A	C	G	T	C	G	T	A	G	G	A
sum tumor	60	36	93	3	93	1	78	16	94	0	84	12	86	10	67	29
blood freq	0.59	0.41	0.98	0.02	0.99	0.01	0.82	0.18	1.00	0.00	0.89	0.11	0.90	0.10	0.70	0.30
B1	1	1	2	0	2	0	1	1	2	0	2	0	2	0	2	0
B2	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B3	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B4	1	1	1	1	2	0	1	1	2	0	2	0	2	0	1	1
B5	1	1	2	0	2	0	1	1	2	0	2	0	2	0	1	1
B6	1	1	2	0	1	1	1	1	2	0	1	1	1	1	2	0
B7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B9	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B11	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B12	1	1	2	0	2	0	1	1	2	0	1	1	1	1	2	0
B13	0	2	2	0	2	0	2	0	2	0	2	0	1	1	1	1
B14	0	2	2	0	2	0	2	0	2	0	0	2	1	1	2	0
B15	1	1	2	0	2	0	2	0	2	0	1	1	1	1	2	0
B16	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B17	0	2	2	0	2	0	0	2	2	0	2	0	2	0	2	0
B18	1	1	2	0	2	0	2	0	2	0	1	1	2	0	1	1
B19	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B20	0	2	2	0	2	0	0	2	2	0	2	0	2	0	2	0
B21	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B22	2	0	2	0	2	0	1	1	2	0	2	0	2	0	2	0
B23	1	1	2	0	2	0	1	1	2	0	1	1	0	2	2	0
B24	0	2	1	1	2	0	0	2	2	0	2	0	2	0	2	0
B25	0	2	2	0	2	0	2	0	2	0	2	0	2	0	0	2
B26	1	1	2	0	2	0	1	1	2	0	2	0	2	0	2	0
B27	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
B28	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
B30	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B31	2	0	2	0	2	0	2	0	2	0	1	1	2	0	1	1
B32	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B34	0	2	2	0	2	0	1	1	2	0	0	2	0	2	2	0
B35	0	2	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B37	0	2	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B38	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B39	2	0	2	0	2	0	2	0	2	0	2	0	2	0	0	2
B40	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B41	1	1	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B42	1	1	2	0	2	0	2	0	2	0	2	0	2	0	0	2
B43	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B44	0	2	2	0	2	0	1	1	2	0	1	1	1	1	1	1
B45	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B46	0	2	2	0	2	0	1	1	2	0	2	0	2	0	2	0
B47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B48	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0

FIGURE 8b(1), sheet 9 of 12

	Intron 6 423232		Intron 6 423258		Intron 7 460553		Intron 7 460564		exon 8 461199		exon 8 461199		exon 8 461231		exon 8 461337	
	C	G	A	G	C	T	G	A	G	A	T	C	A	G	A	C
sum tumor	94	2	85	11	88	4	91	1	83	13	93	1	93	1	94	0
blood freq	0.98	0.02	0.88	0.13	0.98	0.02	1.00	0.00	#REF!	0.19	0.99	0.01	0.99	0.01	1.00	0.00
B1	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B2	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B3	2	0	2	0	2	0	2	0	1	1	1	1	2	0	2	0
B4	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B5	2	0	2	0	1	1	2	0	1	1	2	0	2	0	2	0
B6	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B7	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B8	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B9	2	0	2	0	n/a	n/a	n/a	n/a	1	1	2	0	2	0	2	0
B10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B11	2	0	2	0	2	0	2	0	0	2	2	0	2	0	2	0
B12	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B13	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B14	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
B15	2	0	1	1	2	0	2	0	1	1	2	0	2	0	2	0
B16	2	0	2	0	n/a	n/a	n/a	n/a	2	0	n/a	n/a	n/a	n/a	n/a	n/a
B17	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B18	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B19	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B20	1	1	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B21	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B22	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B23	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B24	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B25	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B26	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B27	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B28	2	0	2	0	n/a	n/a	n/a	n/a	2	0	2	0	2	0	2	0
B29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B30	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B31	2	0	1	1	2	0	2	0	2	0	2	0	2	0	2	0
B32	2	0	2	0	1	1	2	0	2	0	2	0	1	1	2	0
B33	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B34	2	0	0	2	2	0	2	0	2	0	2	0	2	0	2	0
B35	2	0	2	0	n/a	n/a	n/a	n/a	0	2	2	0	2	0	2	0
B36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B37	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B38	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B39	2	0	2	0	n/a	n/a	n/a	n/a	2	0	n/a	n/a	2	0	2	0
B40	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B42	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B43	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B44	2	0	1	1	2	0	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
B45	2	0	2	0	2	0	2	0	1	1	2	0	2	0	2	0
B46	2	0	2	0	n/a	n/a	n/a	n/a	1	1	2	0	2	0	2	0
B47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B48	2	0	2	0	n/a	n/a	n/a	n/a	2	0	n/a	n/a	n/a	n/a	n/a	n/a

FIGURE 8b(1), sheet 10 of 12

	exon 8 461520		exon 8 461843		exon 8 461968		exon 8 462125		exon 8 4623998		exon 8 462683		exon 8 462949		exon 8 463958	
	C	G	G	A	T	C	C	T	G	A	C	A	T	G	T	C
sum tumor	93	3	95	1	48	46	94	0	94	0	91	5	96	0	86	4
blood freq	0.97	0.03	0.99	0.01	0.52	0.48	1.00	0.00	1.00	0.00	0.97	0.03	1.00	0.00	0.94	0.06
B1	1	1	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B2	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B3	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B4	2	0	2	0	0	2	2	0	2	0	2	0	2	0	1	1
B5	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B6	2	0	2	0	1	1	2	0	n/a	n/a	2	0	n/a	n/a	2	0
B7	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B8	2	0	2	0	2	0	2	0	n/a	n/a	2	0	2	0	2	0
B9	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B10	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B11	2	0	2	0	0	2	2	0	2	0	2	0	2	0	n/a	n/a
B12	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B13	2	0	2	0	2	0	2	0	n/a	n/a	2	0	2	0	n/a	n/a
B14	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B15	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B16	n/a	n/a	n/a	n/a	n/a	n/a	2	0	2	0	1	1	2	0	n/a	n/a
B17	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B18	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B19	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1
B20	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B21	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B22	2	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1
B23	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B24	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B25	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
B26	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
B27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B28	2	0	2	0	1	n/a	2	0	2	0	2	0	2	0	n/a	n/a
B29	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B30	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B31	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B32	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B33	1	1	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B34	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B35	2	0	1	1	1	1	2	0	2	0	2	0	2	0	2	0
B36	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B37	2	0	2	0	1	1	2	0	2	0	2	0	n/a	n/a	2	0
B38	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
B39	2	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B40	2	0	2	0	1	1	2	0	n/a	n/a	2	0	n/a	n/a	n/a	n/a
B41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B42	2	0	2	0	1	1	2	0	2	0	2	0	2	0	1	1
B43	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B44	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B45	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
B46	2	0	2	0	0	2	2	0	2	0	2	0	2	0	n/a	n/a
B47	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
B48	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

FIGURE 8b(1), sheet 11 of 12

	exon 8 463966		exon 8 464237		exon 8 464735		exon 8 465074		exon 8 54404		exon 8 54460	
	C	T	G	A	T	A	T	C	G	A	C	A
sum tumor	89	1	94	2	92	4	94	0	65	23	74	2
blood freq	0.99	0.01	0.98	0.02	0.90	0.10	1.00	0.00	0.74	0.26	0.96	0.04
B1	2	0	2	0	2	0	2	0	n/a	n/a	n/a	n/a
B2	2	0	2	0	2	0	2	0	2	0	2	0
B3	2	0	2	0	2	0	2	0	2	0	2	0
B4	2	0	2	0	1	1	2	0	2	0	2	0
B5	2	0	2	0	2	0	2	0	2	0	2	0
B6	2	0	2	0	1	1	2	0	2	0	1	1
B7	2	0	2	0	2	0	2	0	1	1	2	0
B8	2	0	1	1	2	0	2	0	2	0	2	0
B9	2	0	2	0	2	0	2	0	n/a	n/a	n/a	n/a
B10	2	0	2	0	2	0	2	0	1	1	2	0
B11	n/a	n/a	2	0	2	0	2	0	2	0	2	0
B12	2	0	2	0	1	1	2	0	1	1	2	0
B13	n/a	n/a	2	0	1	1	2	0	n/a	n/a	n/a	n/a
B14	2	0	2	0	2	0	2	0	2	0	n/a	n/a
B15	2	0	2	0	2	0	2	0	2	0	2	0
B16	n/a	n/a	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
B17	2	0	2	0	2	0	2	0	2	0	2	0
B18	2	0	2	0	2	0	2	0	1	1	2	0
B19	2	0	2	0	1	1	2	0	2	0	2	0
B20	2	0	2	0	2	0	2	0	2	0	2	0
B21	2	0	2	0	2	0	2	0	1	1	2	0
B22	2	0	2	0	1	1	2	0	2	0	2	0
B23	2	0	2	0	2	0	2	0	1	1	2	0
B24	2	0	2	0	2	0	2	0	2	0	2	0
B25	2	0	2	0	1	1	2	0	1	1	1	1
B26	2	0	2	0	1	1	2	0	1	1	1	1
B27	2	0	2	0	2	0	2	0	1	1	2	0
B28	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B29	2	0	2	0	2	0	2	0	0	2	2	0
B30	2	0	2	0	2	0	2	0	2	0	2	0
B31	2	0	2	0	2	0	2	0	1	1	2	0
B32	2	0	2	0	2	0	2	0	2	0	2	0
B33	2	0	2	0	2	0	2	0	1	1	2	0
B34	1	1	2	0	2	0	2	0	1	1	2	0
B35	2	0	2	0	2	0	2	0	1	1	2	0
B36	2	0	2	0	2	0	2	0	0	2	2	0
B37	2	0	2	0	2	0	2	0	2	0	2	0
B38	2	0	2	0	2	0	2	0	2	0	2	0
B39	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B40	2	0	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
B41	2	0	2	0	2	0	2	0	1	1	2	0
B42	2	0	2	0	1	1	2	0	2	0	2	0
B43	2	0	2	0	2	0	2	0	2	0	2	0
B44	2	0	2	0	2	0	2	0	1	1	2	0
B45	2	0	1	1	2	0	2	0	2	0	2	0
B46	n/a	n/a	2	0	2	0	n/a	n/a	n/a	n/a	n/a	n/a
B47	2	0	2	0	2	0	2	0	1	1	2	0
B48	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

FIGURE 8b(1), sheet 12 of 12

Patient Codes: B=patient blood, T=patient tumor, LC=Liverpool controls									
Template	Patient #	Amelogenin		170,487		167,989		56,346	
		Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2
	3 B100	2	0	2	0	2	0		
	3 B101	2	0	2	0	2	0		
	3 B102	2	0	2	0	2	0		
	3 B103	2	0	1	1	1	1		
	3 B104	2	0	1	1	1	1		
	3 B105	2	0	2	0	2	0		
	3 B106	2	0	2	0	2	0		
	3 B107	2	0	2	0	2	0		
	3 B108	2	0	2	0	2	0		
	3 B49	2	0	2	0	2	0		
	3 B50	2	0	2	0	2	0		
	3 B51	2	0	2	0	2	0		
	3 B52	2	0	2	0	2	0		
	3 B53	2	0	2	0	2	0		
	3 B54	2	0	2	0	2	0		
	3 B55	2	0	1	1	1	1		
	3 B56	2	0	1	1	1	1		
	3 B57	2	0	2	0	2	0		
	3 B58	2	0	2	0	2	0		
	3 B59	2	0	2	0	2	0		
	3 B60	2	0	2	0	2	0		
	3 B61	2	0	1	1	1	1		
	3 B62	2	0	2	0	2	0		
	3 B63	2	0	2	0	2	0		
	3 B64	2	0	1	1	1	1		
	3 B65	2	0	2	0	2	0		
	3 B66	2	0	2	0	2	0		
	3 B67	2	0	2	0	2	0		
	3 B68	2	0	2	0	2	0		
	3 B69	2	0	2	0	2	0		
	3 B70	2	0	1	1	1	1		
	3 B71	2	0	2	0	2	0		
	3 B72	2	0	2	0	2	0		
	3 B73	2	0	1	1	1	1		
	3 B74	2	0	2	0	2	0		
	3 B75	2	0	2	0	1	1		
	3 B76	2	0	2	0	2	0		
	3 B77	2	0	2	0	2	0		
	3 B78	2	0	2	0	2	0		
	3 B79	2	0	2	0	2	0		
	3 B80	2	0	2	0	Undetermined	Undetermined		
	3 B81	2	0	2	0	2	0		
	3 B82	2	0	1	1	1	1		
	3 B83	2	0	2	0	2	0		
	3 B84	2	0	2	0	2	0		
	3 B85	2	0	2	0	2	0		
	3 B86	2	0	0	2	0	2		
	3 B87	2	0	2	0	2	0		
	3 B88	2	0	2	0	2	0		
	3 B89	2	0	1	1	1	1		
	3 B90	2	0	2	0	2	0		
	3 B91	2	0	1	1	1	1		
	3 B92	2	0	2	0	2	0		
	3 B93	2	0	2	0	2	0		
	3 B94	2	0	2	0	2	0		
	3 B95	2	0	1	1	1	1		
	3 B96	2	0	1	1	1	1		
	3 B97	2	0	2	0	2	0		
	3 B98	2	0	2	0	2	0		
	3 B99	2	0	2	0	2	0		
Number seen		120	0	105	15	102	16	na	na
Frequency		100.0%	0.00	87.5%	0.13	86.4%	0.14	na	na

FIGURE 8b(2), sheet 1 of 8

es:B=patien									
Patient #	306382		423220		460564		460929		
	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	
B100	1	1	1	1	2	0	0	2	
B101	1	1	0	2	2	0	0	2	
B102	2	0	0	2	2	0	0	2	
B103	2	0	0	2	2	0	1	1	
B104	2	0	0	2	2	0	0	2	
B105	2	0	2	0	2	0	1	1	
B106	2	0	0	2	2	0	0	2	
B107	2	0	0	2	2	0	2	0	
B108	2	0	1	1	2	0	0	2	
B49	1	1	0	2	2	0	1	1	
B50	2	0	0	2	2	0	0	2	
B51	1	1	1	1	2	0	0	2	
B52	1	1	1	1	2	0	0	2	
B53	1	1	0	2	2	0	1	1	
B54	2	0	2	0	2	0	0	2	
B55	2	0	1	1	2	0	1	1	
B56	0	2	0	2	2	0	1	1	
B57	1	1	0	2	2	0	0	2	
B58	No Amp	No Amp	1	1	2	0	0	2	
B59	2	0	0	2	2	0	0	2	
B60	1	1	0	2	2	0	1	1	
B61	2	0	0	2	2	0	0	2	
B62	1	1	0	2	2	0	0	2	
B63	1	1	0	2	2	0	0	2	
B64	2	0	1	1	2	0	0	2	
B65	No Amp	No Amp	0	2	2	0	0	2	
B66	2	0	2	0	2	0	0	2	
B67	2	0	2	0	2	0	0	2	
B68	2	0	0	2	2	0	0	2	
B69	1	1	1	1	2	0	1	1	
B70	2	0	1	1	2	0	1	1	
B71	1	1	0	2	2	0	0	2	
B72	2	0	2	0	2	0	0	2	
B73	2	0	0	2	2	0	1	1	
B74	1	1	0	2	2	0	0	2	
B75	1	1	0	2	2	0	0	2	
B76	2	0	0	2	2	0	0	2	
B77	2	0	1	1	2	0	1	1	
B78	0	2	0	2	2	0	0	2	
B79	2	0	0	2	2	0	0	2	
B80	1	1	1	1	2	0	1	1	
B81	2	0	0	2	2	0	0	2	
B82	2	0	0	2	2	0	0	2	
B83	1	1	1	1	2	0	1	1	
B84	1	1	0	2	2	0	1	1	
B85	1	1	0	2	2	0	0	2	
B86	2	0	0	2	2	0	1	1	
B87	2	0	1	1	2	0	1	1	
B88	2	0	0	2	2	0	1	1	
B89	2	0	0	2	2	0	0	2	
B90	2	0	0	2	2	0	0	2	
B91	2	0	0	2	2	0	0	2	
B92	1	1	0	2	2	0	0	2	
B93	0	2	0	2	2	0	2	0	
B94	2	0	0	2	2	0	1	1	
B95	2	0	0	2	2	0	1	1	
B96	2	0	1	1	2	0	0	2	
B97	1	1	0	2	2	0	0	2	
B98	2	0	0	2	2	0	0	2	
B99	1	1	1	1	2	0	0	2	
	89	27	25	95	120	0	23	97	
	76.7%	0.23	20.8%	0.79	100.0%	0.00	19.2%	0.81	

FIGURE 8b(2), sheet 2 of 8

ss:B=patier				
Patient #	461968		54404	
	Allele 1	Allele 2	Allele 1	Allele 2
B100	1	1	0	2
B101	1	1	0	2
B102	1	1	0	2
B103	0	2	0	2
B104	1	1	0	2
B105	1	1	0	2
B106	0	2	1	1
B107	0	2	0	2
B108	2	0	1	1
B49	1	1	1	1
B50	1	1	0	2
B51	1	1	0	2
B52	2	0	1	1
B53	0	2	0	2
B54	1	1	1	1
B55	0	2	0	2
B56	Undetermined	Undetermined	Undetermined	Undetermined
B57	1	1	0	2
B58	0	2	0	2
B59	2	0	1	1
B60	1	1	0	2
B61	2	0	0	2
B62	1	1	0	2
B63	1	1	0	2
B64	2	0	0	2
B65	2	0	0	2
B66	1	1	1	1
B67	2	0	1	1
B68	1	1	1	1
B69	0	2	0	2
B70	0	2	0	2
B71	1	1	1	1
B72	2	0	1	1
B73	1	1	0	2
B74	2	0	1	1
B75	2	0	1	1
B76	1	1	1	1
B77	1	1	0	2
B78	0	2	0	2
B79	2	0	0	2
B80	1	1	1	1
B81	2	0	0	2
B82	1	1	1	1
B83	0	2	0	2
B84	1	1	1	1
B85	1	1	0	2
B86	1	1	0	2
B87	1	1	0	2
B88	1	1	0	2
B89	2	0	1	1
B90	2	0	0	2
B91	1	1	0	2
B92	1	1	0	2
B93	0	2	0	2
B94	1	1	No Amp	No Amp
B95	0	2	0	2
B96	2	0	0	2
B97	1	1	1	1
B98	1	1	0	2
B99	0	2	0	2
	61	57	19	97
	51.7%	0.48	16.4%	0.84

FIGURE 8b(2), sheet 3 of 8

Template	Patient #	Amelogenin		170,487		167,989		56,346	
		Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2
2 T100		2	0	2	0	2	0		
2 T101		2	0	2	0	2	0		
2 T102		2	0	2	0	2	0		
2 T103		2	0	1	1	Undetermined	Undetermined		
2 T104		2	0	1	1	1	1		
2 T105		2	0	2	0	No Amp	No Amp		
2 T106		2	0	2	0	2	0		
2 T107		2	0	2	0	2	0		
2 T108		2	0	2	0	2	0		
2 T49		2	0	2	0	2	0		
2 T50		2	0	2	0	2	0		
2 T51		2	0	2	0	2	0		
2 T52		2	0	2	0	2	0		
2 T53		2	0	2	0	2	0		
2 T54		2	0	2	0	2	0		
2 T55		2	0	1	1	1	1		
2 T56		2	0	1	1	1	1		
2 T57		2	0	2	0	2	0		
2 T58		2	0	2	0	2	0		
2 T59		2	0	2	0	2	0		
2 T60		2	0	2	0	2	0		
2 T61		2	0	1	1	1	1		
2 T62		2	0	2	0	2	0		
2 T63		2	0	2	0	2	0		
2 T64		2	0	1	1	1	1		
2 T65		2	0	2	0	2	0		
2 T66		2	0	2	0	2	0		
2 T67		2	0	2	0	2	0		
2 T68		2	0	2	0	2	0		
2 T69		2	0	2	0	2	0		
2 T70		2	0	1	1	1	1		
2 T71		2	0	2	0	2	0		
2 T72		2	0	2	0	2	0		
2 T73		2	0	1	1	1	1		
2 T74		2	0	2	0	2	0		
2 T75		2	0	2	0	1	1		
2 T76		2	0	2	0	2	0		
2 T77		2	0	2	0	2	0		
2 T78		2	0	2	0	2	0		
2 T79		2	0	2	0	2	0		
2 T80		2	0	2	0	2	0		
2 T81		2	0	2	0	2	0		
2 T82		2	0	1	1	1	1		
2 T83		2	0	2	0	2	0		
2 T84		2	0	2	0	2	0		
2 T85		2	0	2	0	2	0		
2 T86		2	0	0	2	0	2		
2 T87		2	0	2	0	2	0		
2 T88		2	0	2	0	2	0		
2 T89		2	0	2	0	2	0		
2 T90		2	0	2	0	2	0		
2 T91		2	0	1	1	1	1		
2 T92		2	0	2	0	2	0		
2 T93		2	0	2	0	2	0		
2 T94		2	0	2	0	2	0		
2 T95		2	0	1	1	1	1		
2 T96		2	0	1	1	1	1		
2 T97		2	0	2	0	2	0		
2 T98		2	0	2	0	2	0		
2 T99		2	0	2	0	2	0		
Number seen		120	0	106	14	102	14	na	na
Frequency		100.0%	0.00	88.3%	0.12	87.9%	0.12	na	na

FIGURE 8b(2), sheet 4 of 8



Patient #	306382		423220		460564		460929	
	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2
T100	Undetermined	Undetermined	1	1	2	0	0	2
T101	1	1	0	2	2	0	0	2
T102	2	0	0	2	2	0	0	2
T103	2	0	0	2	2	0	Undetermined	Undetermined
T104	2	0	0	2	2	0	0	2
T105	2	0	2	0	2	0	1	1
T106	2	0	0	2	2	0	0	2
T107	2	0	0	2	2	0	2	0
T108	2	0	1	1	2	0	0	2
T49	1	1	0	2	2	0	1	1
T50	2	0	0	2	2	0	0	2
T51	1	1	1	1	2	0	0	2
T52	Undetermined	Undetermined	Undetermined	Undetermined	2	0	0	2
T53	1	1	0	2	2	0	1	1
T54	2	0	2	0	2	0	0	2
T55	2	0	1	1	2	0	1	1
T56	0	2	0	2	2	0	1	1
T57	1	1	0	2	2	0	0	2
T58	2	0	1	1	2	0	0	2
T59	2	0	0	2	2	0	0	2
T60	1	1	0	2	2	0	1	1
T61	2	0	0	2	2	0	0	2
T62	1	1	0	2	2	0	0	2
T63	1	1	0	2	2	0	0	2
T64	2	0	1	1	2	0	0	2
T65	2	0	0	2	2	0	0	2
T66	2	0	2	0	2	0	0	2
T67	2	0	2	0	2	0	0	2
T68	2	0	0	2	2	0	0	2
T69	1	1	1	1	2	0	1	1
T70	2	0	1	1	2	0	1	1
T71	Undetermined	Undetermined	0	2	2	0	0	2
T72	2	0	2	0	2	0	0	2
T73	1	1	0	2	2	0	1	1
T74	1	1	0	2	2	0	0	2
T75	1	1	0	2	2	0	0	2
T76	2	0	0	2	2	0	0	2
T77	2	0	1	1	2	0	1	1
T78	0	2	0	2	2	0	0	2
T79	2	0	0	2	2	0	0	2
T80	1	1	2	0	2	0	2	0
T81	2	0	0	2	2	0	0	2
T82	2	0	0	2	2	0	0	2
T83	Undetermined	Undetermined	1	1	2	0	Undetermined	Undetermined
T84	1	1	0	2	2	0	1	1
T85	1	1	0	2	2	0	0	2
T86	2	0	0	2	2	0	1	1
T87	2	0	1	1	2	0	1	1
T88	2	0	0	2	2	0	1	1
T89	2	0	0	2	2	0	0	2
T90	2	0	0	2	2	0	0	2
T91	2	0	0	2	2	0	0	2
T92	1	1	0	2	2	0	0	2
T93	0	2	0	2	2	0	2	0
T94	2	0	0	2	2	0	1	1
T95	2	0	0	2	2	0	1	1
T96	2	0	1	1	2	0	0	2
T97	1	1	0	2	2	0	0	2
T98	2	0	0	2	2	0	0	2
T99	1	1	1	1	2	0	0	2
	88	24	25	93	120	0	22	94
	78.6%	0.21	21.2%	0.79	100.0%	0.00	19.0%	0.81

FIGURE 8b(2), sheet 5 of 8

Patient #	461968		54404	
	Allele 1	Allele 2	Allele 1	Allele 2
T100	Undetermined	Undetermined	0	2
T101	1	1	0	2
T102	1	1	0	2
T103	0	2	0	2
T104	1	1	0	2
T105	1	1	0	2
T106	0	2	1	1
T107	0	2	0	2
T108	2	0	1	1
T49	1	1	Undetermined	Undetermined
T50	1	1	0	2
T51	1	1	0	2
T52	2	0	Undetermined	Undetermined
T53	0	2	0	2
T54	1	1	Undetermined	Undetermined
T55	0	2	0	2
T56	Undetermined	Undetermined	Undetermined	Undetermined
T57	1	1	0	2
T58	0	2	0	2
T59	2	0	Undetermined	Undetermined
T60	1	1	0	2
T61	2	0	0	2
T62	1	1	0	2
T63	1	1	Undetermined	Undetermined
T64	2	0	0	2
T65	2	0	0	2
T66	1	1	1	1
T67	2	0	1	1
T68	1	1	1	1
T69	0	2	0	2
T70	0	2	0	2
T71	Undetermined	Undetermined	Undetermined	Undetermined
T72	2	0	1	1
T73	1	1	0	2
T74	2	0	1	1
T75	2	0	1	1
T76	1	1	1	1
T77	1	1	0	2
T78	0	2	0	2
T79	2	0	0	2
T80	Undetermined	Undetermined	Undetermined	Undetermined
T81	2	0	0	2
T82	1	1	1	1
T83	0	2	0	2
T84	1	1	1	1
T85	1	1	0	2
T86	1	1	0	2
T87	1	1	0	2
T88	1	1	0	2
T89	2	0	Undetermined	Undetermined
T90	2	0	0	2
T91	1	1	0	2
T92	1	1	0	2
T93	0	2	0	2
T94	1	1	0	2
T95	0	2	0	2
T96	2	0	0	2
T97	1	1	1	1
T98	1	1	0	2
T99	0	2	0	2
	58	54	12	90
	51.8%	0.48	11.8%	0.88

FIGURE 8b(2), sheet 6 of 8

Template	Patient #	Amelogenin		170,487		167,989	
		Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2
4 LC100						1	1
4 LC101						2	0
4 LC102						2	0
4 LC103						2	0
4 LC104						2	0
4 LC105						2	0
4 LC106						2	0
4 LC107						2	0
4 LC108						1	1
4 LC109						2	0
4 LC110						2	0
4 LC111						2	0
4 LC112						2	0
4 LC113						2	0
4 LC114						No Amp	No Amp
4 LC115						1	1
4 LC117						2	0
4 LC118						2	0
4 LC15						2	0
4 LC22						2	0
4 LC23						1	1
4 LC24						No Amp	No Amp
4 LC25						2	0
4 LC26						2	0
4 LC27						1	1
4 LC28						2	0
4 LC29						2	0
4 LC30						2	0
4 LC31						1	1
4 LC32						1	1
4 LC33						2	0
4 LC34						2	0
4 LC35						Undetermined	Undetermined
4 LC36						2	0
4 LC37						2	0
4 LC38						2	0
4 LC39						0	2
4 LC40						2	0
4 LC41						2	0
4 LC42						2	0
4 LC43						1	1
4 LC44						2	0
4 LC45						2	0
4 LC46						2	0
4 LC47						2	0
4 LC48						2	0
4 LC49						Undetermined	Undetermined
4 LC50						2	0
4 LC51						2	0
4 LC52						2	0

FIGURE 8b(2), sheet 7 of 8

Template	Patient #	Amelogenin		170,487		167,989	
		Allele 1	Allele 2	Allele 1	Allele 2	Allele 1	Allele 2
	4 LC54					2	0
	4 LC55					2	0
	4 LC56					2	0
	4 LC57					1	1
	4 LC58					2	0
	4 LC59					1	1
	4 LC60					2	0
	4 LC61					2	0
	4 LC62					2	0
	4 LC63					2	0
	4 LC64					2	0
	4 LC65					2	0
	4 LC66					2	0
	4 LC67					1	1
	4 LC68					2	0
	4 LC69					2	0
	4 LC70					2	0
	4 LC71					2	0
	4 LC72					1	1
	4 LC73					2	0
	4 LC74					2	0
	4 LC75					2	0
	4 LC76					2	0
	4 LC77					No Amp	No Amp
	4 LC78					2	0
	4 LC79					1	1
	4 LC80					2	0
	4 LC81					Undetermined	Undetermined
	4 LC82					0	2
	4 LC83					2	0
	4 LC84					2	0
	4 LC85					2	0
	4 LC86					2	0
	4 LC88					2	0
	4 LC89					1	1
	4 LC90					2	0
	4 LC91					2	0
	4 LC92					2	0
	4 LC93					2	0
	4 LC94					2	0
	4 LC95					2	0
	4 LC96					1	1
	4 LC97					2	0
	4 LC98					2	0
	4 LC99					2	0
Number seen						102	12
Frequency						89.5%	10.5%

FIGURE 8b(2), sheet 8 of 8

	exon 1B 169812 (2589)		exon 1B 169823 (2600)		exon 1C 167950 (741)		exon 1C 167989 (780)		exon 1C 168054 (844)		Intron 3 243187 (1120+101)		exon 3 243055 (1089)		exon 6 423067 (1699)	
	C	G	A	G	C	G	T	G	C	G	C	T	C	T	T	C
	0.98	0.02	1.00	0.00	0.90	0.10	0.99	0.01	1.00	0.00	0.75	0.25	0.94	0.06	1.00	0.00
Total count	177	3	180	0	171	19	191	1	192	0	118	40	173	11	186	0
Total count	180		180		190		192		192		158		184		186	
% of allele	98.3%	1.7%	100.0%	0.0%	90.0%	10.0%	99.5%	0.5%	100.0%	0.0%	74.7%	25.3%	94.0%	6.0%	100.0%	0.0%
C21	1	1	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C22	2	0	2	0	2	0	2	0	2	0	0	2	1	1	2	0
C23	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C24	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C25	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C26	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C27	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C28	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C29	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C30	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C31					1	1	2	0	2	0	2	0	2	0	2	0
C32	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C33					2	0	2	0	2	0	1	1	2	0	2	0
C34	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C35	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C36					2	0	2	0	2	0	2	0	2	0	2	0
C37	2	0	2	0	2	0	2	0	2	0	1	1	1	1	2	0
C38	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C39	2	0	2	0	0	0	2	0	2	0	2	0	2	0	2	0
C40	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C41	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C42	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C43	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C44	2	0	2	0	2	0	2	0	2	0	1	1	1	1	2	0
C45	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C46	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C47	2	0			2	0	2	0	2	0	2	0	2	0	2	0
C48	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C49	2	0	2	0	2	0	2	0	2	0	1	1	1	1	2	0
C50	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C51	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C52	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C53	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C54	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C55	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C56	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
C57	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0
C58	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
C59	2	0	2	0	1	1	2	0	2	0	1	1	2	0	2	0
C60	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C61	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C62	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C63	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C64	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C65	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C66	2	0	2	0	2	0	2	0	2	0	1	1	1	1	2	0
C67	2	0	2	0	1	1	2	0	2	0			2	0	2	0
C68	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C69	2	0	2	0	2	0	2	0	2	0	0	2	1	1	2	0
C70	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C71	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C72	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C73	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C74	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0
C75	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
C76	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C77	2	0	2	0	2	0	2	0	2	0					2	0
C78	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C79	2	0	2	0	1	1	2	0	2	0			2	0	2	0
C80	2	0	2	0	2	0	2	0	2	0	1	1	2	0	2	0

FIGURE 8c, sheet1 of 6

	intron 6 423149 (1729+52)		intron 6 423163 (1729+66)		intron 6 423220 (1729+123)		intron 6 423232 (1729+135)		intron 7 460564 (1914-136)		exon 8 460929 (2142)		exon 8 461199 (2412)		exon 8 461231 (2444)	
	G	T	A	G	G	A	C	G	G	A	G	A	T	C	A	G
	0.58	0.42	1.00	0.00	0.80	0.20	0.99	0.01	1.00	0.00	0.83	0.17	0.99	0.01	0.99	0.01
	0.58	0.42	1.00	0.00	0.80	0.20	0.99	0.01	1.00	0.00	0.83	0.17	0.99	0.01	0.99	0.01
Total count	22	16	174	0	132	32	155	1	56	0	83	17	135	1	139	1
Total count	38	174	164	156	56	100	0	83	17	135	1	139	1	140	140	140
% of allele	57.9%	42.1%	100.0%	0.0%	80.5%	19.5%	99.4%	0.6%	100.0%	0.0%	83.0%	17.0%	99.3%	0.7%	99.3%	0.7%
C21			2	0	2	0	2	0			2	0	2	0	2	0
C22			2	0	1	1	2	0			1	1	2	0	2	0
C23			2	0	2	0	2	0			2	0	2	0	2	0
C24			2	0	2	0	2	0								
C25			2	0	2	0	2	0								
C26			2	0	1	1	2	0			2	0	2	0	2	0
C27			2	0	1	1	2	0					2	0	2	0
C28			2	0											2	0
C29			2	0	2	0	2	0					2	0		
C30			2	0	2	0	2	0			2	0	2	0	2	0
C31			2	0	2	0	2	0								
C32	0	2			2	0	2	0								
C33			2	0	1	1	2	0								
C34			2	0	1	1	2	0					2	0	2	
C35			2	0	2	0	2	0					2	0	2	
C36			2	0	2	0	2	0			2	0	2	0	2	0
C37			2	0	1	1	2	0			2	0	2	0	2	0
C38			2	0	2	0	2	0			2	0	2	0	2	0
C39	1	1	2	0	1	1	2	0								
C40			2	0	2	0	1	1								
C41	1	1	2	0	2	0	2	0								
C42			2	0	1	1	2	0					2	0	2	0
C43			2	0	1	1	2	0								
C44			2	0	2	0	2	0			2	0	2	0	2	0
C45			2	0	2	0	2	0					2	0	2	0
C46			2	0	1	1	2	0	2		1	1	2	0	2	0
C47			2	0	1	1	2	0	2		1	1	2	0	2	0
C48	1	1	2	0			2	0					2	0	2	0
C49			2	0	2	0	2	0					2	0	2	0
C50			2	0							0	2	2	0	2	0
C51			2	0	2	0	2	0					2	0	2	0
C52			2	0	2	0	2	0	2		2	0	2	0	2	0
C53			2	0	0	2	2	0	2		2	0	2	0	2	0
C54			2	0	1	1	2	0	2		2	0	2	0	2	0
C55	1	1	2	0	2	0	2	0								
C56	0	2			2	0	2	0					2	0	2	0
C57			2	0	2	0	2	0					2	0	2	0
C58			2	0	2	0	2	0								
C59			2	0	2	0	2	0					2	0	2	0
C60			2	0	2	0	2	0			2	0	2	0	2	0
C61			2	0	2	0	2	0	2		2	0	2	0	2	0
C62			2	0	2	0	2	0	2				2	0	2	0
C63	2	0	2	0	2	0	2	0			2	0	2	0	2	0
C64	1	1	2	0	2	0	2	0					2	0	2	0
C65	1	1	2	0	1	1	2	0								
C66			2	0	2	0			2		2	0	2	0	2	0
C67			2	0	1	1	2	0								
C68			2	0	0	2	2	0	2		1	1	2	0	1	1
C69	2	0	2	0	2	0	2	0					2	0	2	0
C70			2	0	2	0	2	0								
C71			2	0							2	0	2	0	2	0
C72	2	0	2	0	2	0	2	0	2		2	0	2	0	2	0
C73			2	0	1	1	2	0	2		1	1	2	0	2	0
C74	1	1			2	0	2	0					2	0	2	0
C75			2	0	1	1	2	0					2	0	2	0
C76			2	0	2	0			2		2	0	2	0	2	0
C77	1	1			2	0	2	0								
C78			2	0	0	2	2	0					2	0	2	0
C79			2	0	1	1	2	0								
C80	1	1	2	0	2	0	2	0					2	0	2	0

FIGURE 8c, sheet 2 of 6

	exon 8 461337 (2550)		exon 8 461520 (2733)		exon 8 461843 (3056)		exon 8 461968 (3181)		exon 8 462125 (3338)		exon 8 54404-AL078582 (54404)		exon 8 54460-AL07858 (54460)	
	A	C	C	G	G	A	T	C	C	T	G	A	C	A
	0.99	0.01	0.99	0.01	1.00	0.00	0.54	0.46	1.00	0.00	0.79	0.21	0.95	0.05
Total count	127	1	110	1	130	0	68	58	104	0	142	38	165	9
Total count	128		111		130		126		104		180		174	
% of allele	99.2%	0.8%	99.1%	0.9%	100.0%	0.0%	54.0%	46.0%	100.0%	0.0%	78.9%	21.1%	94.8%	5.2%
C21					2	0	1	1	2	0	2	0	2	0
C22	2	0	2	0	2	0	0	2			2	0	2	0
C23	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C24											2	0	2	0
C25											1	1	2	0
C26	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C27	2	0	2	0	2	0	1	1			2	0	2	0
C28					2	0	0	2						
C29											2	0	2	0
C30	2	0			2	0	0	2			2	0	2	0
C31											2	0	2	0
C32											1	1	1	1
C33											1	1	2	0
C34	2	0									2	0	2	0
C35	2	0	2	0	2	0	1	1						
C36	2	0	1	1	2	0	0	2	2	0				
C37	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C38	2	0	2	0	2	0	1	1	2	0	1	1	1	1
C39											2	0	2	0
C40											2	0	2	0
C41											2	0	2	0
C42	2	0			2	0					1	1	2	0
C43														
C44	2	0	2	0	2	0	1	1	2	0				
C45	2	0	2	0	2	0	1	1	2	0	2	0	1	1
C46	2	0	2	0	2	0	1	1	2	0				
C47	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C48	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C49	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C50	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C51	2	0	2	0	2	0	0	2			2	0	2	0
C52	2	0	2	0	2	0	1	1			2	0	2	0
C53	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C54	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C55											1	1	2	0
C56	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C57	2	0	2	0	2	0	1	1	2	0	2	0		
C58											2	0	0	2
C59	1	1	2	0	2	0	2	0	2	0	2	0	2	0
C60	2	0	2	0							1	1	2	0
C61	2	0	2	0	2	0	2	0	2	0	2	0		
C62	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C63	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C64	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C65											0	2	2	0
C66	2	0	2	0	2	0	2	0	2	0	2	0	1	1
C67											0	2	2	0
C68	2	0	2	0	2		1	1	2	0	2	0	2	0
C69	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C70											2	0	2	0
C71	2	0	2	0	2	0	2	0	2	0	0	2	2	0
C72	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C73	2	0	2	0	2	0	1	1	2	0	1	1	2	0
C74	2	0	2	0	2	0	1	1			1	1	2	0
C75	2	0	1 ?		2	0	1	1	2	0	1	1	2	0
C76	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C77											2	0	2	0
C78	2	0	2	0	2	0	1	1	2	0	1	1	2	0
C79											1	1	2	0
C80	2	0	2	0	2	0	1	1	2	0	1	1	2	0

FIGURE 8c, sheet 3 of 6

	exon 1B 169812 (2589)		exon 1B 169823 (2600)		exon 1C 167950 (741)		exon 1C 167989 (780)		exon 1C 168054 (844)		Intron 3 243187 (1120+101)		exon 3 243055 (1089)		exon 6 423067 (1699)	
	C	G	A	G	C	G	T	G	C	G	C	T	C	T	T	C
	0.98	0.02	1.00	0.00	0.90	0.10	0.99	0.01	1.00	0.00	0.75	0.25	0.94	0.06	1.00	0.00
Total count	177	3	180	0	171	19	191	1	192	0	118	40	173	11	186	0
Total count	180		180		190		192		192		158		184		186	
% of allele	98.3%	1.7%	100.0%	0.0%	90.0%	10.0%	99.5%	0.5%	100.0%	0.0%	74.7%	25.3%	94.0%	6.0%	100.0%	0.0%
C81	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C82	2	0	2	0	0	2	2	0	2	0	2	0	2	0	2	0
C83	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C84	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C85	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C86	2	0	2	0	2	0	2	0	2	0	0	2	2	1	1	2
C88	2	0	2	0	1	1	2	0	2	0					2	0
C89	2	0	2	0	1	1	2	0	2	0			2	0	2	0
C90	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C91	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C92	0	2	2	0	2	0	2	0	2	0			2	0	2	0
C93	2	0	2	0	2	0	2	0	2	0					2	0
C94	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C95	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C96					1	1	2	0	2	0			0	2	2	0
C97					2	0	2	0	2	0			2	0	2	0
C98	2	0	2	0	2	0	2	0	2	0			2	0	2	0
C99	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C100	2	0	2	0	1	1	2	0	2	0	2	0	2	0	2	0
C101	2	0	2	0	2	0	2	0	2	0	0	2	2	0		
C102	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C103	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C104	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C105	2	0	2	0	2	0	2	0	2	0	0	2	2	0	2	0
C106	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C107	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C108	2	0	2	0	1	1	2	0	2	0	0	2	2	0	2	0
C109	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C110	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C111	2	0	2	0	2	0	1	1	2	0						
C112	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C113	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C114			2	0	1	1	2	0	2	0	0	2	1	1	2	0
C115	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
C117	2	0	2	0	2	0	2	0	2	0			2	0		
C118	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
	90	90	90	90	96	96	96	96	96	96	79	79	92	92	93	93

FIGURE 8c, sheet 4 of 6



	Intron 6 423149 (1729+52)		Intron 6 423163 (1729+66)		Intron 6 423220 (1729+123)		Intron 6 423232 (1729+135)		Intron 7 460564 (1914+136)		exon 8 460929 (2142)		exon 8 461193 (2412)		exon 8 461231 (2444)	
	G	T	A	G	G	A	C	G	G	A	G	A	T	C	A	G
	0.58	0.42	1.00	0.00	0.80	0.20	0.99	0.01	1.00	0.00	0.83	0.17	0.99	0.01	0.99	0.01
Total count	22	16	174	0	132	32	155	1	56	0	83	17	135	1	139	1
Total count	38		174		164		156		56		100		136		140	
% of allele	57.9%	42.1%	100.0%	0.0%	80.5%	19.5%	99.4%	0.6%	100.0%	0.0%	83.0%	17.0%	99.3%	0.7%	99.3%	0.7%
C81			2	0									2	0	2	0
C82	1	1	2	0	2	0	2	0					2	0	2	0
C83			2	0	1	1	2	0								
C84			2	0	0	2	2	0			1	1	2	0	2	0
C85			2	0	2	0			2		2	0	2	0	2	0
C86			2	0	2	0	2	0	2		2	0	2	0	2	0
C88			2	0	2	0	2	0	2		1	1	2	0	2	0
C89			2	0	1	1	2	0			1	1	2	0	2	0
C90			2	0	1	1										
C91			2	0	2	0	2	0			2	0	2	0	2	0
C92	2	0	2	0	2	0	2	0	2		1	1	2	0	2	0
C93			2	0	2	0	2	0								
C94			2	0	2	0	2	0					2	0	2	0
C95			2	0												
C96			2	0	2	0	2	0			2	0			2	0
C97			2	0	2	0	2	0								
C98			2	0												
C99			2	0							2	0	2	0	2	0
C100			2	0	2	0	2	0			2	0	2	0	2	0
C101									2		1	1	2	0	2	0
C102	1	1			1	1	2	0	2		2	0	2	0	2	0
C103			2	0	2	0	2	0	2		2	0	1	1	2	0
C104			2	0	1	1	2	0	2		2	0	2	0	2	0
C105	2	0			1	1	2	0	2		2	0	2	0	2	0
C106			2	0												
C107	1	1			2	0	2	0			2	0	2	0	2	0
C108			2	0	2	0	2	0	2		2	0	2	0	2	0
C109			2	0	2	0	2	0	2		2	0	2	0	2	0
C110			2	0	1	1	2	0	2		1	1	2	0	2	0
C111									2		2	0				
C112			2	0					2		2	0	2	0	2	0
C113			2	0							2	0				
C114			2	0							1	1			2	0
C115			2	0	2	0	2	0	2		0	2	2	0	2	0
C117			2	0	2	0	2	0			1	1	2	0	2	0
C118			2	0	2	0			2		2	0	2	0	2	0
			87	87	82	82	78	78	28	0	50	50	68	68	70	68

FIGURE 8c, sheet 5 of 6

	exon 8 461337 (2550)		exon 8 461520 (2733)		exon 8 461843 (3056)		exon 8 461988 (3181)		exon 8 462125 (3338)		exon 8 54404-AL078582 (54404)		exon 8 54460-AL07858 (54460)	
	A	C	C	G	G	A	T	C	C	T	G	A	C	A
	0.99	0.01	0.99	0.01	1.00	0.00	0.54	0.46	1.00	0.00	0.79	0.21	0.95	0.05
Total count	127	1	110	1	130	0	68	58	104	0	142	38	165	9
Total count	128		111		130		126		104		180		174	
% of allele	99.2%	0.8%	99.1%	0.9%	100.0%	0.0%	54.0%	46.0%	100.0%	0.0%	78.9%	21.1%	94.8%	5.2%
C81	2	0	2	0	2	0	1	1	2	0	1	1	2	0
C82	2	0	2	0	2	0			2	0	2	0	2	0
C83											2	0	2	0
C84	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C85	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C86	2	0	2	0	2	0	2	0	2	0	2	0	1	1
C88	2	0	2	0	2	0	1	1	2	0	2	0	1	1
C89	2	0	2	0	2	0	1	1	2	0	1	1	2	0
C90											2	0	2	0
C91	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C92	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C93											2	0	2	0
C94	2	0	2	0							2	0		
C95											2	0	2	0
C96											2	0	2	0
C97											2	0	2	0
C98											2	0	2	0
C99	2	0			2	0	2	0			0	2	2	0
C100	2	0	2	0	2	0	0	2			2	0	2	0
C101	2	0	2	0	2	0	1	1	2	0	1	1	2	0
C102	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C103					2	0	2	0	2	0	1	1	2	0
C104	2	0	2	0	2	0	2	0	2	0	1	1	2	0
C105	2	0			2	0	2	0	2	0	0	2	2	0
C106											2	0	2	0
C107	2	0	2	0	2	0	1	1	2	0	2	0	2	0
C108	2	0			2	0	2	0	2	0	1	1	2	0
C109	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C110	2	0			2	0	0	2	2	0	2	0	2	0
C111											1	1	2	0
C112	2	0	2	0	2	0	1	1			0	2	2	0
C113											2	0	2	0
C114					2	0	1	1	2	0	2	0	2	0
C115	2	0	2	0	2	0	0	2	2	0	2	0	2	0
C117					2	0	1	1			2	0	2	0
C118	2	0									2	0	1	1
	64	64	56	55	65	64	63	63			90	90	87	87

FIGURE 8c, sheet 6 of 6

# ER 1 Exons with SNPs v2.0

ER1 Exon 1G (18941-19032 of SEQ ID NO:1)

TTGCTACCTGCTACACACATTTTCACTAGTATGTGATGATTATTCACAAACAACAGTATTGGCCAACA  
 TTTTCCCTCACTGTGAAGTGACATTTGACATCCTTTAGAAAAATTACTGACGGTTTGGACACGATTGTT  
 CTGTGCTTTCTTTCACTCAGCATAAATTTCCCGAAACAGAGATGACTCTTCCAGACTTGCTACCAATGC  
 TTGAACAAACTGTGTAAGCTTAGTCCAAAAAATATTTGATTAAATAGATTTATTTGGTAGATTCTAA  
 GGTTCCAAGCagtcagagaaataatcgagagccctcaaatatctccaaatctgataccaatccttttga  
 ttgtgaattatattctgtagctaccaagaagGTAAGTTTATTTTCTACTCTATTAACCTTTCCCTTT  
 GGACAACCTGAATATTAAGATGACTATGTAAGAGGTTATCACACCAAGCCCTCACACATCAGGATAAAAG  
 CACATGCCATAGAAAAGACATTTGTGCTCAAAAAGGTGATACCAAGACAGGCTGTGGGATATATATGGG

Exon ER1 1F (52818-52940 of SEQ ID NO:1)

TTCCAACCTCCACATGCCTGTCTAGACTTCAAGCTTTATTACGAATAAAGAGAAAATCGGCTGGATGGCAT  
 AAAAAATATTTCAGGCAGATTAAACACATGATTTACCTCTTTGAACATCCATCTTAATGGAAGTGCTAA  
 GAAAGTTAGATTCGGGCCCTGGCTTGGCAAAAGCAAGCCCTCCTCTATTTTTCATGAGATTTT  
 CCAATCCTAGTCAAAATGGTGGTGTAGTTCTTTATTTTGGTACTGCATTTCCCTAATTTTCATGGTCAT  
 AACAGCCTCCTGTCTACCGACTCAGAACGGATTTTACCAaaactgaaaatgcaggctccatgctcagaag  
 ctctttaacaggctcgaaaggtccatgCtctcttctcctgccattctatagcataagaagacagctctct  
 gagtataaatcttctcttcaaGTAGGTACTCCTATTTTCTCAATTTATTTTCCCTTTTGGATATAAT  
 GTGCTACTGTTACAAGCATATTGTAACCTTCAGAGCTTACCTCTCATCTTTAAAAAATGTTCAATTTTTT  
 GTCTTTTCTGCTCCAAGGATATTTTGC

52877 C/A 2,3(N);

Exon ER1 1E (64150-64280 of SEQ ID NO:1)

AGCCAAACATTGATTCTTCAGTGCCTATTGATAAGTGAGACTACTTTTCTTTTAAACAGCCTTATTTCAC  
 TTAAGTGGGGAGTCAAACTAGCTTTTAATTAAGGAAATCTGTAGAAATCACCCACATCTCCCTTTCCCTCT  
 CTGTTAAAAAACAAGgaagaagaactaggaaggagtaagcacaaagatctcttcacattctccgg  
 gactgcggtaccataatcagcacagcactcttgaaaaaggatgtagattttaatctgaactttgaacc  
 atcactgagGTATGTGAACATAGTTTCCCTCTCTCTCTGCTGACTTGTCCGTAAATTGATAAG  
 ATCTAATTTGGTCATCAGTTTGGAGAACGATTTTTCATTTTCTTTTCATTATCAAGTGTGTATTGTC  
 AGGGGCTTAGCAGTACACCTACTATCTGATGGGCACCTCTACATGCGTTGCTT

56346 A/G 2,3(N,I,A,S)

FIGURE 9, sheet 1 of 7

Exon ER1 1D (166228-166322 of SEQ ID NO:1)

ATGGGTCTCAAAGGGAGTGGCCGAAATGCAATGGAAAAAGAGAGATTGTAAGCTAGAAGGCTTAGGAAT  
TGCTCTTAGATTAGGTGTGAAGGCAAGGAAATCAGCCCTCGAAGAAGACAGTGAATTTAATCTGG  
GTGGCTGGAGAGACAGTATGCTGGGCACAGACACGGGAAGTTGAGAGGAACACCATGTTTGAGAATGG  
TGACTCATATTTGAACAAGCCTgcaatcccagcagaccgctgaaaaagtgggctggagacacattcaa  
cggagagccagatcaatcttaccccttctcacctgagagccaGTAAGTCACGGCTGGAACGTGTGT  
GTCCAGCAGGAGGGTAGGGAGGAAGCCAAAGAGAGCTGGAGCCCAAGAGTGAAGTTTTCCTCAAAAGG  
CAGAAGAGGAAAGTCGGCGTAGCACAGTATACTTTCCACCCATGCTCACCAAGCCCAAGGCAAGGCTC

Exon ER1 1C (168002-168120 of SEQ ID NO:1)

TTTCCAGCTCCAAGGTAGGGGCAAGGGCTGGGGTTTCTCTCCCCAGTACAGCTTTCTCTGGCTGT  
GCCACACTGCTCCCTGTGAGCAGACAGCAAGTCTCCCTCACTCCCACTGCCATTTCATCCAGCGCTGTG  
CAGTAGCCAGCTGCGTGTCTGCCGGAGGGGTGCCAAGTGCCCTGCCTACTGGCTGCTTCCGAATCC  
CTGCCATTCCACGCACAAACACATCCACACACTCTCTCTGCTAGTtcacacactgagccactcgcacat  
gcgagcacattcccttccctctcaCtctctcgcccttgacttctacaagcccatggaacatttctg  
gaaagacgttcttgatccagcaggGTAGGCTGTTTGTATTTCTCTCTGTAGCTTTAGCATTTTGAGA  
AAGCAACTTACCTTTCTGGCTAGTGTCTGTATCCTAGCAGGGAGATGAGGATTGCTGTCTCCATGGGGG

167950 C/G 2  
167989 T/G 2, 3 (all)  
168054 C/G 2

ER1 Exon 1B (169543-169825 of SEQ ID NO:1 of assembled BAC-flanked by red primers)  
ER1 Exon 1A (169867-170678 of SEQ ID NO:1 of assembled BAC-flanked by black primers)

TGTGGCTGGCTGCGTATGCAACCGCACACCCCATTTCTATCTGCCCTATCTCGGTTACAGTGTAGTCTCTCC  
CCAGGGTCATCTATGATACACACTACGTATTTCTAGCCACGAGGAGGGGAATCAAACAGAAAGAGAGA  
CAAACAGAGATATATCGGAGTCTGGCACGGGCACATAaggcagcacattagagaaagccgccccctgga  
tccgtctttcggtttatttaagccagctcttccctggccaccttagcagatcctcgtgcgcccccg  
ccccctggccgtgaaactcagcctctatccagcagCgacgacaaGTAAAGTTTCAGGGAAGCTGTCT  
CTTTGGGATCGTCCAAATCgagttgtgcctggagtgtttaagccaatgtcagggcaaggcaacagt  
ccctggccgtccctccagcacctttgtaatgcataatgagctcgggagaccagtactaaagttggaggccc  
gggagccagagctggcggagggttctgctctggagctgcacttgcctcgtcggtcgccccgcttc  
accggaaccgcagGctcccgggcagggccgggcccagagctcgcgtgtcggcgagacatgcgtgcgtc  
gcctctaacctcgggtgtgctcttttccaggtggcccgccggttctgagccttctgcctcgtcgggga  
cacggtctgcaacctgcccgcggccacggaccatgacctgacctccacaccaaagcatcCgggatggc  
cctaactgcatacatccaagggaacgagctggagccctgaaccgtccgcagctcaagatccccctggag  
cggccctggcgaggtgtacctggacagcagcAagcccgccgtgtacaactccccgagggcgccgct  
acgagttcaacgcgcggccgcgccaacgcgaggtctacggtcagacggcctccccctacggcccccg  
gtctgaggtgcGggttcgggtccggtccaaacggcctgggggtttccccccactcaacagcgtgtctccgagc  
ccgctgagctactgaacccgcgcgcagctgtgccttctcctgcagccccccagccagcaggtgcct  
actaactggagaaacgagcccggtctacacggtgcgcgagccggccccgcggttctctacagGTACCC  
GCGCCCGCGCCCGCTCGGGGTGGCCGCGCGCCGACGAGGAGGGAGGGAGGGAGGAGGGA

169812 C/G 2, 3 (A,S); 169823 A/G 2  
170068 G/T 2  
170256 T/C 2,3 (all), 6  
170368 A/G 2,3 (A)  
170487 g/c 2,3 (n,c,a), 6

FIGURE 9, sheet 2 of 7

GAGCCTAGGGAGCTGCGGGAGCCGCGGACCGCGGACCCGAGGGTGCGGCGCAGGGAGCCCCGGGGCGCGCG  
GCCAGCCCGGGGGTCTGCGTGCAGCCCGCGGTGCGTTCAGAGTCAAGTTCTCTCGCCGGGCAGCTGAA  
AAAAACGTACTCTCCACCCACTTACCGTCCGTGCGAGAGGCAGACCCGAAAGCCCGGGCTTCCTAACAAA

ER1 Exon 2 (204912-205102 of SEQ ID NO:1)

CAAGTTTGCAATAAACAAATTTCCCTCAAGGTTAATATAATAGGCAACACCTTTTGTGCAACAGACGGC  
AAGAGGTAATGAAGATTAGCTTACATTATGATTCATTATTTCAAAATGTCAGGATAAAGTGGATCTGCT  
GCATCTCCAGAGAGTGATGTTTGTCTTTCTAATGTTAATGGATTTACTGTTTTTCCCCCAGgcc  
aaattcagataaatcgacgccagggtggcagagaaagattggccagtagccaatgacaaggggaagtatggct  
atggaatctgccaaggagactcgctactgtgcagtgtgcaatgactatgcttcaggctaccattatggag  
tctggtcctgtgagggctgcaaggccttcttcaagagaagattcaagGTAATAGTGTGTTGAAAACGAC  
TTCTATTTTGTATCCTATGAGCAGATCCTAAGAGCCAAAGCGACTGAGGAAGGAAGACATAGAATCAGCC  
ATTTGTACAAAACATGAATCCCTAGTAGTCCACTAGTATCTTTGGTAGAAACATGGAGAAGAGACAGGA  
TCTCAGGAGAAGGAGTTGACACATGGCAGGGCAGCTGAGGCTGAGTAATTCGCTTCCTTCCTTTGGCAA  
GACTCAATCAGTCTTGAGCAACTCTACAGAAGAAATCCACTAGCTGGATCTCTGAGGAAAAAAGAAATGT

ER1 Exon 3 (242970-243086 of SEQ ID NO:1)

ACACCACCATACCCAGGTTTTTTTTTGTATTTTGTAGAGACGGGGTTTCACCATGTTGGTCAGGCTGGT  
CTTGAACTCCTGACGTCGTGATCCACCTGCCTCGGCTCCCAAAGTCTGGGATTACAGGCATGAGCCAC  
CGTGCCCGGCCCATGAGAGGTTTTTGTGCACTTCAAGAAGGACAGAAAAAGGCAGGCTGGGGAGC  
AACATAGTAAGGCTGAGGAAGTGATAGGAAAAACAGCCTCCAAAAGGTTTCCCTGTAGATTCTGACTGGCT  
AAGTTTCCTGAAATAATATTAATTTCTGCTCTTGTCTTTAATAGgacataacgactatatgtgtccagc  
caccacccagtgaccattgataaaaacaggaagagctgccagcgtccggtccgTaaatgctac  
gaagtgggaatgatgaaagtgTAGGTACATCTCTCCAGGGCCCTTGGGATGGCCCTGGCCACCCG  
CCAGTGTGGCTCTACCCATTGGAATAACACCATGGGAATTTGTGTTTTTTCTTTTAAATGTTTTTT  
TCTATTCTTATTTTCTTTGCAACAAAAGTATTTTCATAATCCATTTTATTTAAAAAGGTGGAAGTGTC  
TGGAACCTGGAA

243055 C/T 2, 6  
243187 T/C 2, 3 (all)

ER1 Exon 4 (306168-306503 of SEQ ID NO:1)

TATAACACCTGTTACACACACACACCCCTACCTAGTGTGTCGGAATCAGTTTGTATGGGCTCACCAAAGCCT  
ACTGTTCAATTTTTCAGGAGTTTTGTAAGCCATTTGATGTGAGACAAGTGGCCTGAAGTTTGTATGTTGG  
TGGTATTTACACCATGAAAATTTGGCATGTTATGGTGGTAGTATTTACACCATGAAAACTGCTACAAATAG  
AAATCTTTTCTCTCTCTTGAGAGGCCACTTGTTGAACACTTACCAGCTCACCTGTGCTTGAAAGTAT  
TTCTTCAAATAAAAATGAAAGCTGGTTAGCTTTTGAATAATTTTGTATATAAAGTTTACACGGGAAAAAAT

FIGURE 9, sheet 3 of 7

AAACTAAATTTTTTCCACCTGTGTTTTTCAGggatacgaagaccgaagaggaggagaatgttgaa  
 acacaaagcgcagagagatgatggggaggggcaggggtgaagtggggtctgtctggagacatgagagctgcc  
 aacctttggccaagcccGctcatgatcaaacgctctaagaagaacagcctggccttgtccctgacggccg 306292 G/A 2  
 accagatggtcagtgccctgttgatgctgagcccccCatactctattccgagtatgatcctaccagacc 306382 C/G 2,3 (C,I,S),6  
 cttcagtgaaagcttcgatgatgggcttactgaccaacctggcagacagggagctggttcacatgatcaac  
 tgggaggaagggtgccagGTAAGAAATGCGAAGCGCAGCTTTTAAGAGTCAATAGCTTTTCAAGAACTTG  
 TTGTGATGTCATGGGAGAAATAGTGGGGGAAAAGCAATAACATGTTATGTAATTTGGTTTCAAGGTT  
 ACAGGAGATGTGTTTCATTTTCAGTATCAATACACTGTAATTTCCAGGAGATTAGGAAATAATATTTTAA  
 AATCAGAAATCTAGAAGACTGAAATTTCTTAAATGACATAATTTATTTTAAACCATCTCATTTACCAAAA  
 AGATTTAGGGTGGACACTACATGGTAAACTATTTAATAGTGATGTTTACAGTAGCAGAAAATTTTAAAC  
 ACTAAATGAACACAAAAAGTTTGTAAATATTAATGACCTTTGTTGAAAAACATCTCAATTAATCAACG

ER1 Exon 5 (373640-373778 of SEQ ID NO:1)

GTAATGATTGGAGAAAGCTTTAAATCTCCTAGTTCCACATTAGAAAAACAAGAACACATTTTGGTGGTTATT  
 ACCCGAAGTAATCATAATGTCACCTTTTTTCCATCTGACTCATATCCCAAGTGATTTATTATATATG  
 GAGTTTCTGAGTCTTTCTTTTACATATTACAAAAAAGAGTGTGATTTAGGGACGAAGCAAGAAATAA  
 AAATTTAGTGACTTTTCATTTCTGCTGTGCCCAATTCCTATTGGGCATAAGGCAAGTAATTTAAATTTCT  
 TAGCACCTTAGCATCTTCTACTCAAAACAGAAATGAGGAACAGTCACAGGTTACTATTATAGTGTCTAAG  
 TAGAAGGCACACAAGTTTTTCACACTGAGTATAACACTTTATAGAAGCTAAGTGTGTGCTCAAGTTGGT  
 ACATTTCTGTAGATGTGACACTATGGCACTAAGAAACTTAATGCCACATTGAAATTCATTGAGATAGCTA  
 GACTTTAAAAATAATTTACTTGACTTCACATATAAGTATGTTCTGATTTGCAATTTACTCCATCTAGTAGAAA  
 ATAGACCTTGTCAGTTCAAATCCCTGTTGCAATTAATTTACCAGTAATGAGTCTTTTTCATTTGAGTCAG  
 CAGGGTTTTTCTTGCTTGTTTTCAGgcttcttggtattgacccctccatgatcaggtccacctctagaat 5 (227106-227244)  
 gtgcctggctagagatcctgatgattggctcgtcgtcgctccatggagcaccagggaagctactgtt  
 tgcctCCTAACTTGCTCTTGGACAGGTAAGTGACCTGGCTGTAGCTTAGGAGTAGCATGTTCTTTACGATC  
 ATAGTTCAATTCATGAAACTATTTTATTCATCTCTCGGTGAAGCTTCAGAGAACTTTATTAGGTATGTTTA  
 CTTAACAAAAGAGTGCAATGGGGGTGATGAAGCCTAGTCAAATTCACAGAAAGCTAAGGATAACTTTCTG  
 CTAGACATTACCTCAGAAGAATTCATATTCTTAATACACACACACACACACACACACACACTCA  
 CACTCTCTCTCTCTCTGTCATTATGAATGGTAATTTTCTAACTCCATCTTCAACTTGTATCATA  
 TAAAAATTATAATAACCTCTCTTTAAATTAATCTGTTGCTTCTTGTACATCCATACCAATAGCC  
 TATTCATTTTCTTCTCCAATTTCCCATCCGTAAATGAAGAAATTTGACCAGAGTTCTGAAGGTCACAT  
 TCAGGTCGACAAAATTCATTTTCATGTTCAAATATGTTACCTCTTTAAACATACCATCTGGGGTTGCCTT  
 GGAATGTGGGTCCCATTGTTTTTTTTTTTTCAGTCAATTCCTTAGAGTCATAGAATTTAGATATTACTCAA  
 TAGCAGCTGCCACTGATAGAGTCTCCACCCTGCACCAGCTGTGATGCTAAACACTTTACATATATTATCT  
 CATTTAATCATACCGGACTCCTAGGAGGCAGGAATGTTCATCATCCATGTTTACCAGAAAGGAAACTAA  
 ATCTCAGAGACATCCTGCTACTTGCAAAAGAGGAAAGCTCACTAAATGGTGGAGCCAGAGTTCAAATTC  
 AAGATCTTTCTGGCTCCGGTAAGCTCTGTTACCTCCTGTGCTGGGCACATGGTCTTCCCACTCTCATGTT

FIGURE 9, sheet 4 of 7

ER1 Exon 6 (422964-423097 of SEQ ID NO:1)

ATTGTAGTTGTTCTTTGTACTTCAAAAAGCACTACAAAACACAAACCATCAGGACTTGTACATTATTTGAAG  
GCTATGAGCATCTTCAGCCGAGGCCCTGTTTTATTCCAGAACTACCACATTGTTAGAAATATAGTAGC  
AGATCAATATACGTGTATAGATAAAATCGTTTACCCAGATCTTGATCATTTTCAATTACCCATAGGTGA  
AGAACTCCATATTTAACATGGCAGACTTGAGGACTGAACCTACCTCTCTCTAAGAAAGTTGAAATGAGA  
ATGTTTTATTGATGGGAAATATATTTTTTTTGCCTTCTAGAATTCAAAATGAATGTTTCATATTCATG  
AAGACAATGGCTGATAGTTTTTTTGTAAAGATTTAGAACCCAGTGGATTTTTTATGAATGTGAACCCCTTTCA  
TGCTCTGTGGAAGATTTTCTGTTTTTAATCTTTTTTATTATTATTTTGTCTATGTTTTTCATAGg  
aaccagggaataatgtagaggcatggtggagatcttcgacatgctgctgctacatcatcctcggttc  
gcatgatgaatctgcagggagagggttctgctgctcaaatctattttgcttaattctgGTGAGTT  
GATAACACAAAGATAACTCAATGCTGGATGAAATGTTTATTGTAGTTTTCAACCAGATACGATCTACCCA  
CTCCAAAGGCATAATGTCATAAATAGAAAGAACTACTGACACACATTTTAAATTAACCTACCAACATTG  
CAGATTCCTTATAAAGGTAGAACCATGCTAGCCAAATAGACACATGAAAAATTGTAATTTGGCATTGAAT  
CAAAATGGCCTTTTGAGCTAAAAATTTTTGTATGCTTTCACAGATAGGATGTTTTTATTCAAATGGTACATGT  
ATATAGACATATGTTAGTTGATAGTTATATATGCTGAAAAATAAGTAGACCAAGTAATTCGTTAAGAA

6 (276430-276563)

423149T/G 2,3(N,C,I,A); 423163 A/G 2,3(N,C,I,A)  
423220 G/A 2,3(N,C,I,A); 423232 C/G 2  
423258 A/G 2,3(N,C,I,A)

ER1 Exon 7 (456354-456537 of SEQ ID NO:1)

GGGTCCAGAGCATCCCCATTGCTAGACTACTGTGCTGAGGAAGGGCACTGGCTCATTTGTACATCCCATG  
AAACACTTGGGTCTCCTAGACCTCATCCTCTTTTGGCTTCTCTCTCACTCTCTCTCGGCATTCAGg  
agtgtacacatttctgtccagcaccctgaagtctctggaagaggaccatatccaccgagtcctggac  
aagatcacagacacttctgatccacctgatggcaaggcagcctgacctgcagcagcagcagcagc  
tgccccagctcctcatcctctccacatcagccacatgagGTAGGCATCTGTGGCTTCTCTACAGG  
AGAGACATAAGAAAAACATGCCCCCAAACCTATGTGACAGCTGGCCGGGAAGGACTGGTGCCTGCATATG  
GAGAGTGCACTTGTGACAGTTCTTGGCATAGAATAAGCATAAATGCTATAGGAGGACAGAGAGAGGT  
TTTAAATCTGCGAGGGTCACAGGGCAAGTGTGAGAGAAGGCATAGAGGAAGCGATACCTTACGCTTGGTTT

ER1 Exon 8 (460701-465237 of SEQ ID NO:1)

TCAAACTAGATAATAGTTGTTCTCTCCCAACCCCGCCACCAAGTAGTGTGGTGGGCGAGAGAGTTGTG  
GCTAGTGGAGGAGAGCAGAGCGAGAGTAGCGAAAGGAGAAATGCCATTGGCTACATTTCCCTCTGCCC  
ATTTCCCGCTGCCCATTTCCCCCTTGTTTTCTTGAACTGAACTGAGCTCTGGGCACGTGTTTAGGCCCT  
AGCAGGGACAGGATAAAGCCTGCTTCTTAGGAATTCGCACTGAGGGTGTGAGTGTGTGCACGTTGTG  
TTTGGAGGGGAGATAAACACAAAATAAATAAAGGAGAAATTCAGGCAGTGATAAGAGTGTGAGAA  
AAACAGAACGGTGTGAAAGAGGAAGGCTGAGCCTGCAGAGGCTTGAGGCTGTGCCACTGGGTAGCGGTA  
GGCCTTCCGAGGAGCGGCAATTGAAGACCGGAGGAAGGTTATCCAGCAAGTAGGAACAGCAAGTGT  
AGGTCCCTAAGTCTTGGGGAGCTTAGTTCCTTTAAGGGCAGCACAAAAATCAGTGTGGCTCCGGAGAG  
CACATTAGGGGAGAGAGGAGGAGAGCTTTGGAGACATGGATGGAAGCTGGACCAGTTGGCCCTTGTGTA  
ACATGGAAGAGCAATTAGATCGTATTCTGAGTTAAATGGGAAGTGACGTGAGAGATTTAACAAATGGAGCG  
TCTTGAACCTGCTTTACTCATTTAAAAATACCCACTCCTGCTTGGCTGAATATCTCATGTTGTCTTTTAGA

Forward primer - Coriell  
459706 G/C 3(I)  
459832 G/A 3(S)  
459913 A/G 3(N,I)  
460024 C/G 3(all)  
460056 C/T 3(I)

FIGURE 9, sheet 5 of 7

AGCTTTGGCGATCCTATTGAATGCATTTAGGTCTTATTTGGAGGGGAATAGGATCTCATTTGAGGCCACG  
 GAGGTCCATGGAAGTCACTGCATAGCAAAATACCTGAAAGTGGTGCAGGGAGAGTGTGAGGGTGGGAC  
 CGCCCTGGTAGGAGTGGAAAATGAAAACACACGGCCATGAGTTCAGATTAGGGCTTCTGAAAGCCCT  
 CAGCTTCCAGCTCCCATCCTAAAGTGGGTCTTTAAACAGGAAGAAAGATTGCTAAGTGTCTTTG  
 GAGTTCCTCTTCTTCCCTTCTAGGGATTTTCAGCACTCCTGGGGCTCGGTTGGCTCTAAAGTAGTCTCT  
 TTCTGTGTCTTCCCACCTACAGtaacaaaggcatggagcatctgtacagcatgaagtgaagaacgtggt  
 gccctctatgacctgctgctggagatgctggacgccccaccgtacatcgccccactgacgctggagg  
 gcatccgtggaggagacggaccaaagccactggccactggggctctactcgcattcccttgcaaa  
 agtattacatcacggggagggcagagggtttccctgccacGgtctgagagctccctggctccacacgggt  
 tcagataatccctgctgcattttaccctcatcatgcaccacttttagccaaattctgtctctgcatacac  
 tccggcatgcataccaaaccaaaggctttctagatgagtggccattcatttggctcagttcttagtg  
 gcacatcttctgtctgttggaaacagccaaaggattccaaaggctaaatctttgtaacagctctctt  
 tccccctgtctatgttaactaagcgtgaggaTtcccgtagctcttcacagctgaactcagctcAagggtg  
 gggctcagataactctgtgcattttaagctactgtagagaccagggcctggagagtagacattttgccc  
 tgataagcacactttttaaatggctctaagAataagccacagcaaaagaatttaaagtggctcctttaattgg  
 tgacttggagaaagctaggtcaagggtttattatagcacacctcttctattctatggcaatgcattccctt  
 tatgaaagtggtaacaccttaaaagcttttatgactgtagcagatctcctgattggtgattgcaattcattcc  
 Ccctataggaatacaaggggcacacagggagcagatccccctagttggcaagactattttaacttgata  
 cactgcagattcagatgtgctgaaagctcctcctgcttccggtcatgggtccagtttaattcatgc  
 ctcccatggacctatggagagcagcaagtgtacttagttaagtctccctatatgaggataaagtctctg  
 atttttgtttttttttgtttacaaaagaaagccctccctgaactgcagtaaggtcagcttca  
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 ggcagaaactggatacagttctgaggcacagccagactgctcaggtggccctgccacaggtgcagct  
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 tctacaacttggccagcacctgggacgggagaggggtgggaccgttgcgtcactactcaggtg  
 actggggcctggcagattacgtatgccctgggtggttttagagataatccaaatcaggggttggtttgg  
 ggaagaaaatcctcccccttcccccccggttccctaccgctccactccctgccagctcatttccct  
 tcaatttcccttgacctataggctaaaaaagaaaggctcattccagccacagggcagccttccctgggcc  
 ttgctctctagcacaattatgggttacttcccttttcttaacaaaaaagaatgttgatttccctctgg  
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 ggggacaattttatgtatctgtttaaggataatgtttaagaacataaattctttgtgtgttgttttaa  
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 gtttatcagacaattgaattagtaattctgtctTggatttaatttgactgggttaacatgcaaaaaacca  
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 tttagacagtagtaaatgggtcagtggggttctttttaaattgtttatacttagattttcttttaaaaaaatt

8.3 f primer  
 460553 T/C 2, 3(I); 460564 G/A 2

460929 A/G 1, 2, 3(all), 4, 5, 6

461199 T/C 2 461231 A/G 2

461337 A/C 3(A)

461520 G/C 2

461843 G/A 2

461968 T/C 2, 3(all)  
 8.25 f primer  
 462125 C/T 3(A)  
 8.3r primer

462683 C/A 3(I,A,S)

462949 T/G (A,S)

8.17f primer / 8.25r primer

FIGURE 9, sheet 6 of 9



aaaaataaaacaaaaaaatttctagagactagacgatgtaataccagctaaagccaaaaataatacagtg  
 ggaagggtttacattattcatccaatgtgtttctattcatgttaagatactactacatttgaagtgggca  
 gagaacatcagatgattgaaatgttcgccccaggggtctccagcaactttgaaaatctctttgtatttta  
 ctggaagtgccactaatggacagcagataatttctggctgatgttggtattgggtgtaggaacatgattt  
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 c**C**gtaatgattctataatgccatcatgcagcaattatgagaggctaggtcatccaaagagaagaccctat  
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 agatggactgtgggtactgggagtgcactaacaccatagtaatgtctaatttccacaggcagatctgc  
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 tggtcaggtctgggagcgtgatctagattacactgcaccattcccaagttaatccctgaaaaacttac  
 ttccaactggagcaaatgaactttgtgccccaaatccactctttcagtagcgttaattgtctgttt  
 ccaactgcatttcccttccaattgaattaaagttggcctc**G**tttttagtcaatttaaaattgttttctaa  
 gtaattgctgcctctattatggcacttcaattttggcgtctttttgagattcaagaaaaattctattc  
**T**ttttttgcataccaattgtgcctgaacttttaaaatatgaaatgctgccatgttccaaaccccatcgtc  
 agtgtgtgttttagagctgtgcacctagaacaacataattgtcccatgagcaggtgcctgagacacag  
 accctttgcattcacagaggtcattggttatagagacttgaattaaatgaagtgcattatggcagttt  
 ctgttctcacaggtgataaaaatgcgtttttgtgcactacatactctcagtgtagagctcttgtttt  
 atgggaaaaggctcaaatgcaaatgtgtttgtagtggaataatagcccttttgcgatgcataactatta  
 ctgatgtactcggttttgcagcttgcgtttgtttaatgaaacacacttgtaacctcttttgcaact  
 ttgaaaaagaatccagcgggatgctcgagcaacctgtaaaaaatctcacaacctatttgatgttcaaat  
 aagaattaaactAAAGACACAGAGTTGTGTTTGTGAAGCTCCACTCTTGCTAGCAGTTCACCACTGAT  
 CCTCTAAAAATCAAAAGTGGTTAAACGATCTGTGCACACACAGTGAAGTCTGAATGCTAAAGCCTCTCCTCACC  
 TCTCATCCCTCTGCCCAACACCCACAGGTGTATCAGGAAGTGTGTGGACACTGTGGTCAGGCAGAACTGGC  
 CTCAATCTTTGGCTTACCACCTTACAAATTTATGATCTTGGCAGTTGATTTTTCAGAGTTTCGGCTTC  
 CTTATCAACAATAATGATGAAGTAATAAACACCTAATTCACACGATGGTGGTGAAGCACTAAGTGAAGTGC  
 TCAATTAACAATAATAGTTGCTGTTTTTTTAAATGCCCTGGCCCCAAATCCTTCCCTGTGAGGGAGAGAAGGATGCT  
 TGAGAGTGGTTATTTAT**TGAAATGAATCAGTGAATGGAAGAAATCAGT**GATCTGAAATGATATAATTAGCTTA  
 AAAACCTCTCCCTCATTTCTGAAGGTAAAGCAGGAACAATTTGGTCCACCCCCCACCCAGGTTTCCATTCA  
 GGACTCCCTTCCCTTTTTTGGAGCTACCTGCGTGCTTCCCTTTACCCATTTTCTCAGATTTAACTGATGAAT

(bold = SNP position, underlined = primer sequences, lowercase = exon.)

FIGURE 9, sheet 7 of 7